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ABSTRACT

The first comprehensive assessment of substance abuse and women, this report arose from an analysis of more than 1,700 scientific and technical articles, surveys, government reports and books. Results show that American women are closing the gap with men in that they are increasingly likely to abuse substances at the same rate as men. Findings show that women are starting to smoke, drink, and use drugs at earlier ages than ever before. Unlike men, though, women get drunk faster, become addicted quicker, and develop substance abuse-related diseases sooner. Furthermore, at least one of every five pregnant women uses drugs, drinks, or smokes. An enormous gap exists between what experts know about women's substance abuse and what is known and acted on by women and those who care for them. It is recommended that women be made aware of the dangers of substance abuse. Prevention programs must address the reasons why women abuse substances and such programs must identify girls at highest risk. Health professionals, too, must recognize that women will manifest symptoms of substance abuse that are different from those of men, which may include a woman trying harder to hide her substance abuse due to intense shame. Contains approximately 750 references. (RJM)

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Substance Abuse and The American Woman

June 1996

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Executive Summary

and

Foreword

Substance Abuse and The American Woman is the first comprehensive assessment of the impact on women of all substance abuse--illegal drugs, alcohol, tobacco and prescription drugs. The National Center on Addiction and Substance Abuse at Columbia University (CASA) has conducted an analysis of the available data and more than 1,700 scientific and technical articles, surveys, government reports and books over the past two years in an effort to lift the curtains of denial that have hidden the major public health problem of women's substance abuse for so long.* As a result of this study, CASA will assemble an issue of the *American Journal of Public Health* dedicated to women and substance abuse to be published in the spring of 1997.

The results are disturbing. In the worst way, American women are closing the gap with men: Women are increasingly likely to abuse substances at the same rate as men and women are starting to smoke, drink and use drugs at earlier ages than ever before. Women get drunk faster than men, become addicted quicker and develop substance abuse-related diseases sooner. At least one of every five pregnant women uses drugs, drinks or smokes, putting herself and her newborn in great and avoidable danger.

There is an enormous chasm between what the medical and scientific experts know about women's substance abuse and what is known and acted on by women, their husbands

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* A copy of the complete bibliography is available from CASA. To order call (212) 841-5227 or fax (212) 956-8020.

and friends, their doctors and other health professionals. Too many of us do not understand the different ways in which women exhibit symptoms of abuse, the distinct risk factors and reasons why women begin to abuse substances, what makes it difficult for them to stop, and that women need treatment tailored to their specific needs. Until we recognize that what's good for the gander may not help the goose, we will not have effective prevention and treatment programs for women.

First, every woman should be aware of the danger in which substance abuse places her. Women are more vulnerable than men to the immediate and long-term consequences of alcohol and drug abuse. Drinking like men will cause women to develop diseases faster than men. Drug and alcohol abuse make women more likely to be victims of rape and other violent crimes and abuse. Abusing alcohol while taking prescription drugs places women in the fast lane to dependence. One of every two female smokers will die of a tobacco-related disease.

Second, prevention programs for girls and women must be designed around the reasons why they abuse substances. Preventive programs must identify girls at highest risk, such as those who have been physically or sexually abused. These programs must recognize the link women see between being thin and smoking or using drugs like cocaine and heroin and the overriding importance women attach to being thin. (On any given day, 40 percent of American women are on diets.) They must consider that women may smoke or abuse alcohol and drugs to cope with stress or sexual dysfunction and the likelihood that girls are more responsive to peer pressure than boys. Only after accounting for these and other

differences in the reasons why women and men use tobacco, alcohol and drugs will this nation be able to mount an effective substance abuse prevention campaign.

Third, health professionals (female and male), as well as husbands, friends, teachers--each of us--must become better able to identify women who have drug and alcohol abuse problems. Family doctors accustomed to diagnosing drug and alcohol problems in men by external manifestations, such as drunk-driving and frequent fighting, should become better aware that a woman's symptoms are usually inner-directed--depression, anxiety, low self-esteem--and that a woman's often intense shame can lead her to try harder than a man to hide her substance abuse from family, friends and physicians.

Fourth, these two years of work have uncovered a tremendous void in research on women and substance abuse. Much past research was conducted on men only; the results were assumed to apply to men and women alike. The more recent recognition that women's problems require separate attention has served to underscore how much we do not know. We need better understanding of how to motivate women to avoid substance abuse, why women abuse substances and what treatments work, for which women, under what circumstances. This is especially true with respect to elderly women. We need a women's agenda for substance abuse research.

Closing the Gap

In the best of ways, American women are closing the gap with men--filling posts as corporate officers, law firm partners, doctors, academics and in other professions once not open to them. At the same time, in the worst of ways, women are becoming like men--in

the extent to which they abuse alcohol, tobacco, illegal drugs and prescription medication, and in the high price they pay for it. Today, 21.5 million women smoke, 4.5 million are alcoholics or alcohol abusers, 3.5 million misuse prescription drugs and 3.1 million regularly use illicit drugs.** While these numbers are lower than the corresponding figures for men, the gap between the sexes has been closing.

From 1965 to 1994, the percentage of men who smoke dropped 46 percent (from 52 percent to 28 percent), but among women it dropped only 35 percent (from 34 percent to 22 percent). If this trend continues, the United States will be the first nation in the world where the number of women who smoke equals the number of men who smoke.

The percent of drug addicts who are women doubled between 1960 and the late 1970s. Today, some 40 percent of crack addicts are women. The percentage of women (3.7 percent) and men (3.9 percent) who abuse prescription drugs is already equal. Women receive two-thirds of prescriptions for tranquilizers and anti-depressants. Women taking these medications often do not understand or accept the great danger in using them while drinking alcohol. Washing down a few tranquilizers or anti-depressants with wine, beer or cocktails invites dependence and danger.

Among adolescents, the gender gap is gone. Since 1975, girls have been equally or more likely than boys to smoke. Adolescent boys and girls are now equally likely to drink. Among adults men are more likely to have used illegal drugs, but among teens girls and boys are equally likely to have used illicit drugs. For adults over age 30, the ratio of men to women who ever used illicit drugs other than marijuana is 1.5 to 1; for 12- to 18-year-olds,

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** These numbers cannot be added because many women abuse more than one substance.

the ratio is 1 to 1. Age of first drug use is also about the same, having dropped for both boys and girls. For adults age 19 to 44, the average age of first marijuana use is 17.2 for women and 16.7 for men; among adults age 45 and older it is 29.5 for women and 24.9 for men. Today's daughters are 15 times likelier than their mothers to have begun using illegal drugs by age 15. In substance abuse and addiction, women have come the wrong way.

What's Use for Men Can Be Abuse for Women

As serious as it is, the shrinking gender gap is only half the problem.

What's moderate drinking for a man spells big trouble for a woman. Women become intoxicated after drinking roughly half as much as men and suffer more quickly the long-term effects of alcohol. They metabolize alcohol differently, get drunk faster, become addicted more easily and develop cirrhosis of the liver more readily. Female alcoholics are up to twice as likely to die as male alcoholics in the same age group. A greater percentage of alcoholic women than men die from alcohol-related accidents, violence and suicide. Among teens in alcohol treatment, most girls had considered suicide, while most boys had not. The risk of liver cirrhosis becomes significant for women at less than two drinks a day; for men this risk becomes significant after six drinks per day.

The consequences of drug abuse strike women with a special vengeance. While fewer than half of men with AIDS acquired HIV from injection drug use, 70 percent of women did so--either by sharing dirty needles or having sex with an injection drug user (among crack addicts, often in exchange for drugs). The added feminine twist is that a woman is more likely to get AIDS from an infected man than a man is to get AIDS from an infected woman.

Women are paying an increasingly frightful toll for smoking. Since 1986, more women have died from lung cancer than from breast cancer. Every year, at least 140,000 women die from illnesses attributable to cigarettes: 62,000 from heart disease, 36,000 from lung cancer, 25,000 from chronic lung disease, 10,000 from other cancers including those of the esophagus, larynx and cervix, and 8,000 from lower respiratory infections.

These and other illnesses and accidents attributable to female substance abuse accounted for $68 billion in health care costs in 1995, or 12.3 percent of all health care spending for women.

Diseases are just one part of the onslaught which daily threatens substance abusing-women. The link between substance abuse, sex and violence is particularly sinister for women, starting at early ages. Teenage girls who drink more than five times a month are five times more likely to have sex and a third less likely to have it with a condom than girls who do not drink. Women who have been drinking are likelier to become the objects of unwanted sexual advances on the part of men; 60 percent of women who had been drinking reported that another drinker had become more sexually aggressive to them. The link between assaults, including rape, and alcohol abuse is tight: in 75 percent of rapes and 70 percent of domestic violence, either the victim or the assailant has been drinking.

The changing role for women in today's society has given them unprecedented opportunities, but it has also planted land mines on their road to success. Women who work in male-dominated environments are more likely to abuse alcohol than those who don't. Working women are 89 percent likelier to abuse alcohol than homemakers (1.7 percent

versus 0.9 percent). The most likely to be substance abusers are working women who are without work (7.2 percent).

Risk factors for substance abuse among women are quite different from those among men. Female alcoholics are more likely than male alcoholics to have a mental health disorder. Women who drink or smoke are more likely to be depressed than men who do so. Nearly 70 percent of female substance abusers in treatment were sexually abused as children; only 12 percent of men were. Eating disorders like bulimia and anorexia occur more frequently among alcoholic women than other women. Alcoholic women are almost five times likelier to attempt suicide than non-alcoholic women of similar age and income.

Illicit drug use and sales account for much of the sharp rise in female prison populations since 1980. Although there are far more men than women in federal and state prisons, from 1980 to 1994 the number of women prisoners quintupled, while the number of men only tripled. By 1991, a third of female state inmates had violated drug laws, compared to a fifth of male inmates, and this does not include all women who committed their crimes while under the influence of drugs or alcohol, or who did so in order to buy drugs.

Threatening the Health of Babies

More than one in every five pregnant women--at least 800,000 women a year--endangers her own and her newborn's health by smoking, drinking and/or using drugs during pregnancy. Drug, alcohol and tobacco use poses one of the greatest threats to the health of newborn babies in this country.

The term "crack baby" makes for great television soundbites and tabloid headlines, but it masks a far more complex and common reality. Virtually every child exposed to crack or cocaine in the womb has also been exposed to other illegal drugs, tobacco and/or alcohol. Far more newborns are Virginia Slims babies, Newport babies or other cigarette babies (820,000 or 20.4 percent) and beer babies, wine babies or other alcohol babies (757,000 or 18.8 percent) than crack babies or other drug babies (500,000 or 13 percent).

Prenatal exposure to tobacco, alcohol and drugs can be tragic for the fetus. Cigarettes account for 20 percent (61,000) of all low birth weight babies, making tobacco the number one preventable cause of this frequent precursor to infant death. Smoking causes up to 141,000 miscarriages, 4,800 newborn deaths and 2,200 deaths from Sudden Infant Death Syndrome. Even after adjusting for factors such as education and income, smoking during pregnancy has been found to lead to lower scores on intelligence, hearing and language tests.

Like tobacco, alcohol poses a great threat to the health of newborns, accounting for 10 percent of all mental retardation. Prenatal alcohol exposure is the single greatest preventable cause of mental retardation. Estimates of Fetal Alcohol Syndrome, which is characterized by behavioral abnormalities, physical deformities and mental retardation, run as high as 12,000 babies a year. Thousands more newborns suffer the less severe birth abnormalities termed Fetal Alcohol Effects.

Much less is known about the specific effects of particular illegal drugs on newborns, but the 1,370 babies born each day exposed to these drugs make clear the pressing need to close this research gap. Of all pregnant drug users, 53 percent smoke marijuana, 20 percent

use cocaine, and 14 percent use heroin, methamphetamines or other illegal drugs. Some 27 percent misuse prescription drugs.

Injection drug use, usually heroin, signs death warrants for thousands of babies before they've received birth certificates. From 1985 to 1995, 16,000 babies were born HIV-positive, infected by their mothers, most of whom had acquired the virus by sharing needles, trading sex for drugs or having sex with an injection drug user. For these babies, the issue is whether they will die before they become orphans.

Care for alcohol-, tobacco- and drug-exposed babies does not come cheaply. The health care costs for babies exposed to alcohol, tobacco and illegal drugs in the womb came to $6 billion in 1995. After release from the hospital costs continue to mount. It can cost $1 million in health care, social services and education to raise a drug-exposed child to age 18.

Illegal drug use not only puts the health of the fetus in danger, it signals more trouble to come. As the number of children in foster care jumped from 280,000 in 1986 to 429,000 in 1991, the percentage of those children under age four exposed prenatally to drugs doubled from 29 percent to 62 percent. From 1985 to 1994, reports of child abuse and neglect rose 64 percent from just under 2 million to more than 3 million; in some cities, more than 75 percent of such cases are linked to drugs and alcohol. In 1994, in New York City, caring for 36,000 children whose parents abuse drugs or alcohol triggered 77 percent--$595 million of the $775 million--of the total foster care costs.

Women, Alcohol and Sexual Dysfunction

As far back as ancient Greece and Rome, women and men have believed that alcohol facilitates sexual enjoyment. However, though alcohol can be disinhibiting for men and women, it depresses physical sexual response. The contrast between expectations and physical reality can be devastating for women. Alcoholic women who report problems of sexual dysfunction (which usually preceded their heavy drinking) often use alcohol to "treat" their problem. Since they end up aggravating it, they find themselves in a vicious circle, medicating their sexual dysfunction with more alcohol, only to make both their addiction and dysfunction worse. It is important for women to understand this link between alcohol and sexual dysfunction.

Tailoring Prevention and Treatment for Women

The closing gender gap, particularly among teenagers and young adults, and increasing health care, social service and criminal justice consequences of substance abuse as the gap closes, cry out for increased prevention and treatment. But to be effective these prevention and treatment programs must take into account the ways in which a woman is not like a man.

Prevention. We should launch a major campaign targeted at pre-teen and teenage girls, tailored to their needs and attacking all substance abuse. Based on everything we know, a young woman or man who gets to age 21 without smoking, abusing alcohol or using illicit drugs is virtually certain never to do so.

Any attempt to fight the deadly consequences of tobacco use by women must address the link between smoking and thinness, a relationship the nicotine pushers cynically exploit. Many women hesitate to quit, or quit only to relapse, because they fear the 11 pound weight gain that often accompanies cessation.

Women's magazines, as well as television and the movies, should take more responsibility here. Fulfilling this responsibility will require many of these magazines to break their own addiction to tobacco advertising revenue. Magazines violate their relationship of trust with their readers when they fail to report fully the health consequences of smoking. Entertainment executives should take care that they do not encourage girls to begin abusing substances by creating television shows and movies that glamorize women who abuse alcohol and smoke without ever showing the diseases, violence and other disastrous consequences of this abuse. The fashion industry should ease off its adulation of social x-ray thinness and display their wares on healthier women.

Treatment. The first step is diagnosis--and the earlier the better. Unfortunately, however, doctors are more likely to miss a substance abuse diagnosis in women than in men, despite the fact that women see physicians more often. Better physician training is essential here, in medical school and continuing medical education programs. Working with Columbia University's College of Physicians and Surgeons, CASA has begun testing the use of recovering female substance abusers in a continuing education program for family practitioners, pediatricians and psychiatrists who specialize in treating adolescents.

We need more treatment programs and we need to learn more about how to encourage girls and women to enter them. In 1989, the year of the most recent

comprehensive survey, less than 14 percent of all women and 12 percent of pregnant women who needed treatment received it. It is a commentary on the tendency to ignore the problem of women's substance abuse that a more recent survey has not been taken, but there is no indication that the situation has improved since then.

Even when slots are available, getting women to treatment is especially difficult. Doctors and nurses are slow to recognize the markers of female substance abuse and often mistake these signs--depression, low self-esteem--for emotional disturbances. Friends, accustomed to seeing the public displays of male abuse, such as crime and violence, often overlook developing inner-directed symptoms among women. Families often discourage women from leaving the home to get help because they feel they need mother to run the household and keep the family together. The stigma surrounding female substance abuse, which for cultural and historical reasons is greater than that for men, has discouraged many women from seeking help.

Treatment programs should provide for the child care needs of women abusers. Those that have a child care component or allow the child to stay with the mother tend to have higher retention rates, a factor associated with greater success. Because women's substance abuse is often tied to physical and sexual abuse during childhood and depression, treatment programs which do not address these underlying issues court failure. More than for men, for women substance abuse is intertwined with the drug and alcohol abuse of their partners: thus, dealing with a husband's abuse is part and parcel of addressing a wife's substance abuse.

Because pregnancy can be a window of opportunity for getting a woman into treatment and because substance abuse during this time harms both the woman and the fetus, effectively treating expecting addicts is a matter of special importance.

Rethinking Conventional Wisdom

Drug and alcohol abuse, particularly the explosion of crack cocaine, forces all of us to rethink our assumptions about families, our foster care system and how to insure a child's well-being. Foster care is no longer about Little Orphan Annie and Daddy Warbucks; it has become a system to salvage the wreckage left in the wake of parental drug and alcohol abuse.

As a society, we must begin to ask, and answer, some difficult questions: Does the assumption that a child is best left with the family hold true when drugs and alcohol have been related to so many cases of neglect, physical beating, sexual abuse and even murder? Do our family court judges have adequate time and expertise to make judgements on what's best for the child? What kind of foster care system do we need today? Are adoptive homes or orphanages better for children than parents with drug or alcohol problems? Can temporary separation from the child motivate substance abusing-parents to seek treatment and stay off drugs and alcohol? How can we identify parents who will be so motivated? How can we identify parents who are more likely to shake their addiction if their children remain with them?

Conclusion

The origins, patterns and consequences of substance abuse are different--and often far more devastating--for women than for men. What motivates a woman to seek--or not to seek--treatment is likely to be different from what motivates a man. Treatment programs must take into account the distinct needs of women.

Those are the differences. But there is a grim consequence common to women and men: women who smoke, abuse alcohol and use illegal drugs like men, will die like men who smoke, abuse alcohol and use illegal drugs--from cancers and heart disease, from violence and AIDS.

This study was made possible by the support of the Bristol-Myers Squibb Foundation, Inc., an extraordinary example of corporate responsibility especially sensitive to women's issues, and The Pew Charitable Trusts, one of CASA's initial supporters. The law firm of Cadwalader, Wickersham and Taft generously conducted, pro bono, a state-by-state survey of laws and court decisions regarding pregnant women and substance abuse.

Jeanne L. Reid was the principal investigator with the guidance of Jeffrey Merrill, Vice President and Director of Policy Research and Analysis. Sharon Gray, CASA's Librarian, Susan Lewis and Russell Jones helped to research the report, which I reviewed and edited. Dr. Herbert Kleber, Executive Vice President and Medical Director, Hila Richardson, Deputy Director of Medical Research and Practice Policy, and John Demers, my Research Assistant, reviewed drafts of the report.

We greatly appreciate the help of outside professionals who made up our advisory board. These talented and dedicated individuals, with extensive experience with the problem of substance abuse among women, provided valuable guidance in setting the course of study and reviewing the report.

We are grateful for the support of our funders and guidance of our advisors, but CASA alone is responsible for the report's contents and conclusions.

Joseph A. Califano, Jr.

I.

The Wrong Way

It's time to face the facts about substance abuse and the American woman.

While more men than women abuse alcohol, tobacco, and licit and illicit drugs, the gender gap has been closing since World War II.[1] Today, one in five American women (compared to one in three men) abuses or becomes dependent on alcohol and/or drugs at some point in her life.*[2]

At least 4.5 million women are alcohol abusers or alcoholics;[3] 3.1 million regularly use illicit drugs; 3.5 million misuse prescription drugs; and 21.5 million smoke cigarettes.** From lung cancer, heart disease, liver cirrhosis, osteoporosis and AIDS, to domestic violence, lost jobs and shattered families, to the damage done to children when mothers use drugs, alcohol or tobacco during pregnancy, the consequences of substance abuse hit women with tragic and deadly force.

Each year, women give birth to some 500,000 babies who have been exposed prenatally to illicit drugs.***[4] More than five of 10 pregnant drug users smoke marijuana;

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* In this study, women and men are ages 15 to 54. "Abuse" and "dependence" are defined according to the Diagnostic and Statistical Manual of Mental Disorders, edition III.

** Unless otherwise noted, all data in this report are from the U.S. Department of Health and Human Services' 1993 National Household Survey on Drug Abuse (NHSDA); women and men are adults over 18 years old. "Abuse" means problem use or dependence. "Alcoholic" is used to connote dependence. Regular illicit drug users took drugs at least monthly during the past year. Prescription drug misusers took stimulants, sedatives, tranquilizers or analgesics non-medically during the past year. Current smokers had at least one cigarette during the past month. Smoking data only are from the 1994 NHSDA, which measured adults ages 18 and over. The numbers in the text above cannot be added because many women use, abuse and misuse more than one substance.

*** National estimates range from 212,000 to 736,000 prenatally exposed newborns each year.

six of 10 use an illicit drug other than marijuana; one of five snorts or smokes cocaine; and one of four misuses prescription drugs.[5] Prenatal use of tobacco and alcohol is much more common; each year, roughly 820,000 women smoke and 760,000 women drink alcohol during pregnancy. These numbers cannot be added because most women use more than one substance.

Smoking

Because the long-term decline in smoking that began in 1965 has been less dramatic among women than men, the gender gap in smoking rates has narrowed. From 1965 to 1994, the percentage of women who smoke dropped 35 percent (from 33.9 percent to 22.1 percent); among men it fell 46 percent (from 51.9 percent to 28.0 percent).* Adolescent girls and boys are now equally likely to smoke. If this gender equity continues, shortly after the turn of the century the U.S. could become the first nation in the world where equal numbers of women and men smoke.[6]

Tobacco companies began targeting women in the 1920s, pitching cigarettes as a route to thinness.[7] "Reach for a Lucky instead of a sweet," said the Lucky Strike ad.[8] The American Tobacco Company described the female market as "a new gold mine right in our front yard." Indeed, Lucky Strike sales almost tripled from 13.7 billion cigarettes in 1925 to more than 40 billion in 1930, making it the leading brand nationwide.[9]

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* 1965 National Health Interview Survey and 1994 NHSDA; data from both surveys measure adults age 18 and over.

After World War II, tobacco companies heralded the modern woman who--still skinny--smoked cigarettes as a sign of her spunk. From Virginia Slims' rallying cry, "You've come a long way baby!" to the updated, "A woman's place is any place her feet will take her," or Misty cigarettes' "Slim 'n Sassy" slogan, cigarette makers continued to trumpet the link between thinness and smoking, merely adding the rebellious spirit of the independent woman who might flout the evidence that nicotine is addictive and deadly.

From the early 1960s to the mid-1980s, as the first large group of women who smoke heavily reached their 50s and 60s, the death rate from lung cancer among female smokers soared 496 percent (from 26 to 155 per 100,000), six times the rate of increase among male smokers (from 187 to 341 per 100,000).[10] In 1986, for the first time, more women died of lung cancer than of breast cancer.[11] A woman who smokes is up to four times likelier to get heart disease, the leading killer of women.[12] Smoking also increases a woman's risk of osteoporosis, producing brittle bones that can break in old age, robbing her of her independence.[13] Such facts prompted Ms. magazine to ask, "If we've come such a long way, why are we still smoking?"[14]

Alcohol Abuse

Women are especially susceptible to the ill-effects of alcohol. They develop alcohol-related illnesses such as liver cirrhosis, hypertension, anemia and malnutrition more rapidly than men.[15] Women who drink heavily are more likely than those who don't to get breast cancer, to be infertile and to suffer violent abuse at the hands of their partners.[16] Teenage girls who drink are more likely than boys who drink--and girls who don't drink--to attempt

suicide, to have sex and have it without a condom, which can lead to unplanned pregnancies and sexually transmitted diseases such as AIDS and gonorrhea.[17]

Illegal Drugs

Women move more quickly than men from trying a drug to getting hooked, and female addicts face more barriers to treatment than male addicts.

Since the advent of crack cocaine in the mid-1980s, the number of crack-exposed newborns and "boarder" babies left in hospitals by cocaine-addicted parents or held there by child welfare investigators has jumped sharply.[18] Reports of child abuse and neglect, most related to drug and alcohol abuse, rose 64 percent, from 1.92 million in 1985 to 3.14 million in 1994.[19] The percentage of children in foster care under age four who had been exposed prenatally to drugs more than doubled, from 29 percent in 1986 to 62 percent in 1991.[20] From 1985 to 1995, some 16,000 children contracted the AIDS virus in the wombs of their mothers, most of whom were infected through their or their sexual partner's injection drug use.[21] Seventy percent of AIDS cases among women stem from such illicit drug use.[22]

The criminal justice consequences of women's involvement with illegal drugs are also increasing at alarming rates. Illicit drug use and sales have sparked the 386 percent rise in the federal and state female prison population, from 12,331 in 1980 to 59,878 in 1994, while the number of men rose 214 percent from 303,643 to 952,585.[23] Among state inmates, a third of women had violated drug laws in 1991, compared to a fifth of men.[24] Many more had committed their crimes under the influence of drugs or alcohol, or to get money to buy drugs.

Stigma

Despite the scope of the problem, a woman's substance abuse has traditionally been tucked behind the curtains of private homes, while a man's is often a public event at bars, athletic events and fraternity parties.[25] Given the different standards to which women traditionally have been held, a female who slips into addiction invites more scorn than her male counterpart.[26] This stigma has discouraged many women from seeking help for their substance abuse, deterred them from entering treatment and contributed to a scarcity of research, prevention and treatment efforts that address the unique needs of women.[27]

How Far Have We Come?

American women have a long history of substance abuse and addiction. In the 19th century, most of the nation's 250,000 opiate addicts were women.[28] Surveys in Michigan in 1878, Chicago in 1880 and Iowa in 1885 found that 61 percent to 72 percent of opiate users were women, typically upper- or middle-class white housewives or socialites.[29]

Women had easy access to drugs from stores that sold over-the-counter patent medicines containing opiates. Doctors commonly recommended them to women for "nervousness," "melancholy" and "female troubles," such as menstrual pain.[30] A 1914 Tennessee study found that most female opiate users were ages 25 to 45, "when the stresses of life begin to make themselves felt with women, and [when menopause begins]. . . . It appears reasonable, therefore, to ascribe to this part of female life, no small portion of the addiction among women."[31] Manufacturers gave opiate "medicines" comforting names such

as "Mrs. Winslow's Soothing Syrup," and advertised them as "women's friends." By the early 1900s, Americans were spending $100 million a year for such potions.[32]

The popularity of opiates stemmed in part from the cultural disdain for women who drank alcohol in public.[33] Women could take opiate "medicines" in the privacy of their own home. Opiate use became so fashionable that Macy's department store sold "exquisitely jewelled gold morphine sets," which contained miniature morphine and cocaine syringes.[34] In contrast, drinking was a social event for men in bars and saloons, where women's presence was considered inappropriate. As one commentator put it in 1894, "Twenty years ago I rarely ever saw a female drinking at the bar of a public house or beerhouse. Now I see numbers so engaged from an early hour in the morning, not a few of these early risers and early drinkers having had an infant at the breast, and giving the child a share of the morning dram."[35] Women leading the Temperance Movement reinforced the belief that those who drank to the point of intoxication were "fallen women," often thought to be promiscuous.[36]

Concerned about the spread of opiate and cocaine addiction, Congress passed the Harrison Act in 1914 to restrict narcotic prescriptions.[37] While many women shied away from illicit sales, some continued to get opiates fraudulently from their doctors; others sought prescriptions for hypnotic and sedative drugs such as barbiturates.[38] The Public Health Service Hospital in Lexington, Kentucky--one of two Federal facilities to treat addicts and the only one to accept women--reported that from 1941 (when it began accepting female opiate addicts) to 1965, 16.5 percent of its admissions--14,866 clients--were women.[39]

With the passage of Prohibition in 1920, speakeasies welcomed both male and female customers. Women's drinking appears to have flourished in the devil-may-care era of the flapper.[40] Yet the stigma endured, particularly for women who got drunk.[41] When women advocated repeal of Prohibition in the 1930s, the American Independent, a Kentucky newspaper, declared that a woman who opposed Prohibition was "either a drunkard," or had an immoral "home life. . . . Most of them are no more than the scum of the earth, parading around in skirts, and possibly late at night flirting with other women's husbands."[42]

To tap the women's market, alcohol companies countered this stigma by depicting the modern women's drinking as a sign of sexy assertiveness. In 1975, the Distilled Spirits Council allowed its members to use women in ads that were "dignified, modest and in good taste," which opened the door to attractive women draped over drinking men's shoulders.[43] Dewar's Scotch updated this image in the 1990s with ads aimed at young female professionals in which a woman puts on her work clothes while a bare-chested man sleeps in the bed beside her.[44] The slogan: "You finally have a real job, a real place and a real boyfriend. How about a real drink?"

New Light On An Old Problem

Over the last 30 years, women's growing presence in factories, offices and legislatures has given visibility to their battles with drugs and alcohol. The entertainment industry dramatized the stereotype of the unhappy housewife who pops pills and empties the liquor closet in the privacy of her home.[45] And the courageous leadership of Betty Ford,

who publicly acknowledged her own alcohol and pill problem, challenged the belief that only "a certain kind" of woman could be an addict.[46]

In 1976 the National Council on Alcoholism created a special office on women and held its first national conference on women and alcoholism.[47] Led by Senator William Hathaway, a recovering alcoholic, the U.S. Senate held hearings on the issue of female drinking, setting the stage for more research on women and alcohol, tobacco and illicit drugs. In 1980, the Department of Health, Education and Welfare issued a Surgeon General's report on women and smoking.

We now know that women are subject to the deadly effects of smoking and are more vulnerable than men to liver cirrhosis and other alcohol-related illnesses. Studies of domestic violence have exposed the extent of spousal abuse when alcohol is used by either victim or perpetrator. Growing evidence of the long-term effects of Fetal Alcohol Syndrome--the mental retardation and birth defects caused by drinking during pregnancy--has inspired a cultural sea-change against the use of alcohol by pregnant woman. Recent studies reveal that most cocaine users also use alcohol and/or tobacco, and suggest that cocaine, tobacco and alcohol can each be severely damaging to the fetus.[48]

The American woman is many people. She is a lawyer, doctor, nurse, engineer, secretary, teacher, housewife, student, mother, daughter and grandmother. She is unemployed, married, single, rich, poor, black, white, Asian, Hispanic and Native American. She is a teenager in high school and a senior citizen in a nursing home. She is a cop on the beat and an inmate on Rikers Island. She is straight and gay, thin and obese,

living in a city and a rural hamlet. She is Catholic, Jewish, Protestant and Muslim. The typical female substance abuser or addict can be any or all of these women.

This report seeks to document what we know about substance abuse and addiction among all women: how their patterns of use and reasons for abuse differ from men and among themselves; the particularly severe health and social consequences they can suffer; their unique responsibilities during pregnancy; their vulnerabilities when drunk; the policy implications that result from these differences; and the importance of recognizing the special needs of women in crafting efforts to prevent and treat substance abuse and addiction.

II.

The Difference

Most substance abuse research has focused on men.[1] Until recently, researchers generally assumed that the nature of substance abuse by women and men is identical or that the size of the problem among women is small, eliminating the need to recruit female subjects. In fact, the problem is widespread, and though women and men often experience similar patterns and consequences of substance abuse, they differ in critical ways.

Alcohol

Although women usually drink less frequently and heavily than men, they may get drunk just as often. On average, women who drink only half of what men drink reach the same level of intoxication.[2] Studies that compare women's and men's average daily alcohol intake have found a ratio of one to two in the amount they drink, but women metabolize alcohol differently than men.*[3] As a result, less alcohol can induce a state of intoxication among women. The Department of Health and Human Services and the Department of Agriculture recommend that a woman have no more than one drink a day, while a man should have no more than two.**[4]

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* Differences in body weight, body water and the stomach enzymes that metabolize alcohol give alcohol a more powerful effect on women. Oral contraceptives further reduce a woman's ability to metabolize alcohol.

** A standard drink is 12 oz. of regular beer, 5 oz. of wine or 1.5 oz. of 80-proof distilled spirits; each contains 0.5 oz. of pure alcohol.

Almost half of all women (40.5 million) and more than half of all men (51.2 million) drink.* The 1993 National Household Survey on Drug Abuse (NHSDA), based on self-reported alcohol use, found that 2.5 million women (2.6 percent of all women) drank at least 60 drinks per month--the measure of heavy drinking established by the National Institute of Alcohol Abuse and Alcoholism (CHART 1). But that measure is based on the male standard for heavy drinking: two drinks a day. Since the recommended maximum for women is half that--one drink a day--alcohol abuse and heavy drinking among women is far more widespread than these reports of alcohol intake suggest. The NHSDA found the percentage of women who drank at least 30 drinks per month to be 6.6 percent (about 6.3 million). (The percentage of men who have 60 or more drinks a month is 13.1 (about 11.4 million).) A study that applied mental health diagnostic criteria to drinking-related behavior among adults concluded that 4.5 million women (4.6 percent) abuse or depend on alcohol, and about 10.6 million men (12 percent) do so.[5]

Age

While women, like men, are less likely to drink as they get older, the proportion who drink heavily changes little.[6] Since tolerance for alcohol decreases with age, this may signal a serious problem among elderly women.[7]

---

* Current drinkers had at least one drink in the last month.

Chart 1

Adult Women and Men Who Drink Heavily
by Age*

Age	Heavy Drinkers** Women	Men
19-30	2.4%	13.0%
31-40	2.4	11.7
41-59	1.8	11.9
60+	4.1	16.5
All	2.6%	13.1%

* Adults are age 19 and older.
** Drinking heavily is having at least 60 drinks in the past month.
Source: 1993 National Household Survey on Drug Abuse

Economic Status

Women and men with lower income are likelier to drink heavily: women in households with income below $15,000 are about twice as likely to be heavy drinkers as women in households with incomes of $15,000 or more (S)* (CHART 2). Among homemakers, those with household incomes below $30,000 are more than four times as likely to drink heavily as those with higher incomes (S).

Education

Heavy drinking rates decline as individuals attain higher levels of education. The exception is binge drinking, which peaks among adults with some college education but without a degree (S) (CHART 3).** Women in college are more likely to binge drink than those of the same age who are not in college (33 percent vs. 25 percent), an indication that binge drinking by women on college campuses is a particularly important target for prevention efforts.[8]

Race and Ethnicity

White women are more likely to drink than African American women (S), but their rates of heavy drinking differ only slightly (NS) (CHART 4). Black women tend to be

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* Comparisons using 1993 National Household Survey Data have been tested for statistical significance. Those that reach a level of significance ($p < 0.5$) are noted (S). Those that do not are noted (NS). Data that are not statistically significant may still reflect meaningful comparisons, but CASA could not rule out the possibility that they stem from random chance. This report only includes non-statistically-significant data when it is consistent with other research.

** Binge drinkers have had five or more drinks in a row at least twice in the past month.

concentrated at the extremes of either abstinence or heavy drinking; those who participate actively in religion are more likely to abstain.[9] Unlike white women, heavy drinking by black women does not drop as their income rises.[10] Native American women have high rates of heavy drinking, but they vary widely by tribal origin.[11]

Relatively few Asian American or Hispanic women report any heavy drinking, although drinking rates rise as they adopt the attitudes, behaviors and other markers of American culture.[12] In some Hispanic and Asian communities, cultural disapproval of public drunkenness discourages women from drinking, but it may also encourage them to keep any drinking secret.[13]

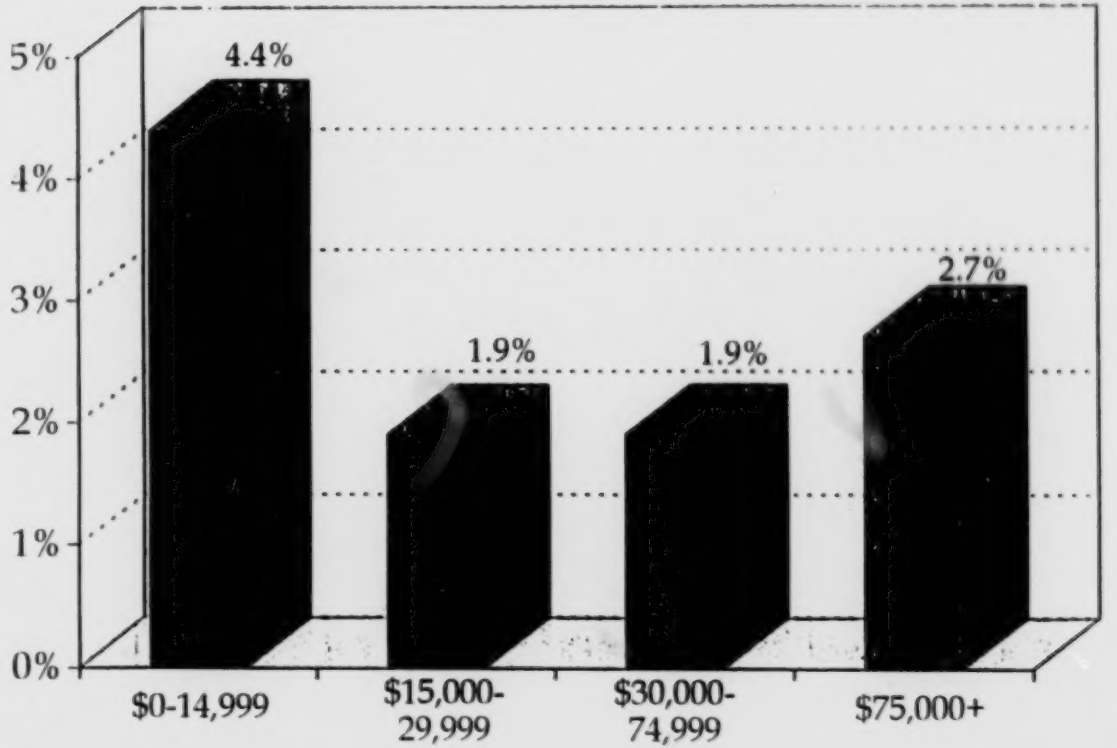
Employment

It is not clear whether women's migration into the paid labor force over the past 30 years led to an increase in their drinking and alcohol-related problems.[14] New roles in the labor force could nurture a woman's self-confidence and personal fulfillment, diminishing her tendency to abuse alcohol.[15] But her responsibilities in factories and offices could create pressures that led to heavy drinking, or simply provide more opportunities to drink.[16]

Surveys have not found a dramatic rise in drinking among women during the last 30 years. In fact, the percentage of women and men who drink decreased in the 1980s.[17] But there is a sharp difference between the older and younger generation of women. Heavy drinking by women ages 18 to 29 did not drop during the 1980s, and their reports of alcohol-

Chart 2

Adult Women Who Drink Heavily*
by Household Income



*Drinking heavily is having at least 60 drinks in the past month.
Source: 1993 National Household Survey on Drug Abuse

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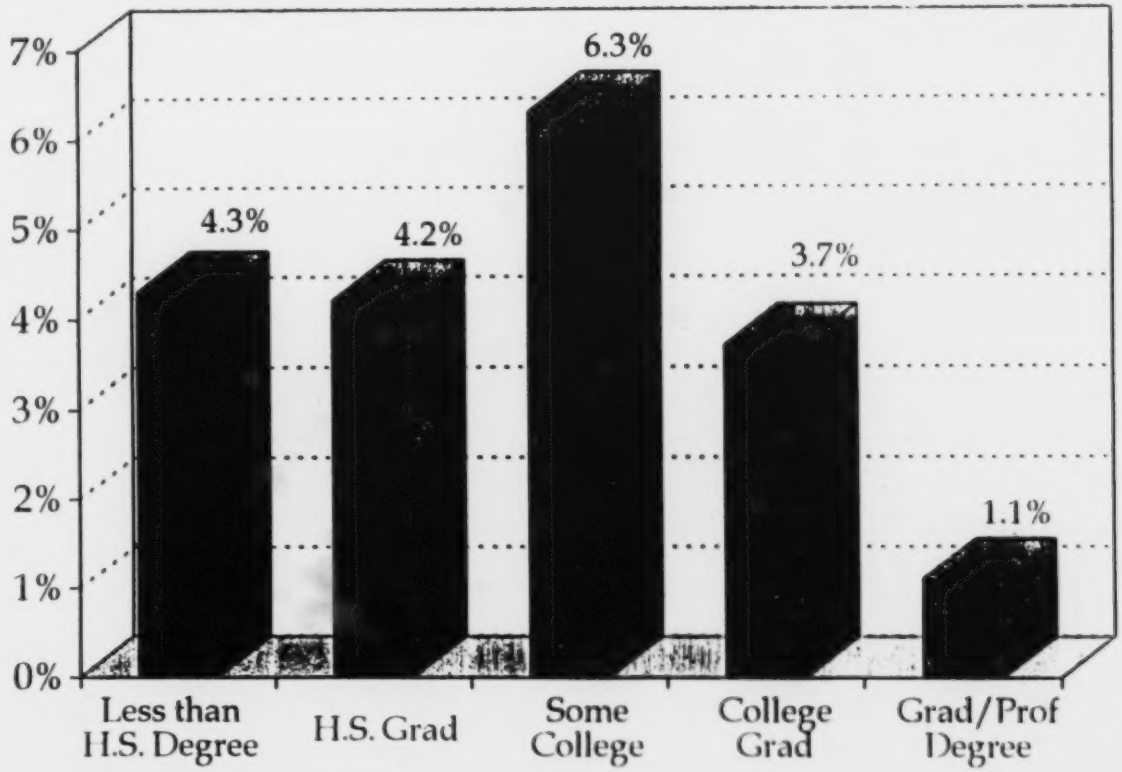
Chart 3

Adult Women Who Binge Drink*
by Education



* Binge drinkers have had 5 or more drinks in one sitting at least twice in the past month.
Source: 1993 National Household Survey on Drug Abuse

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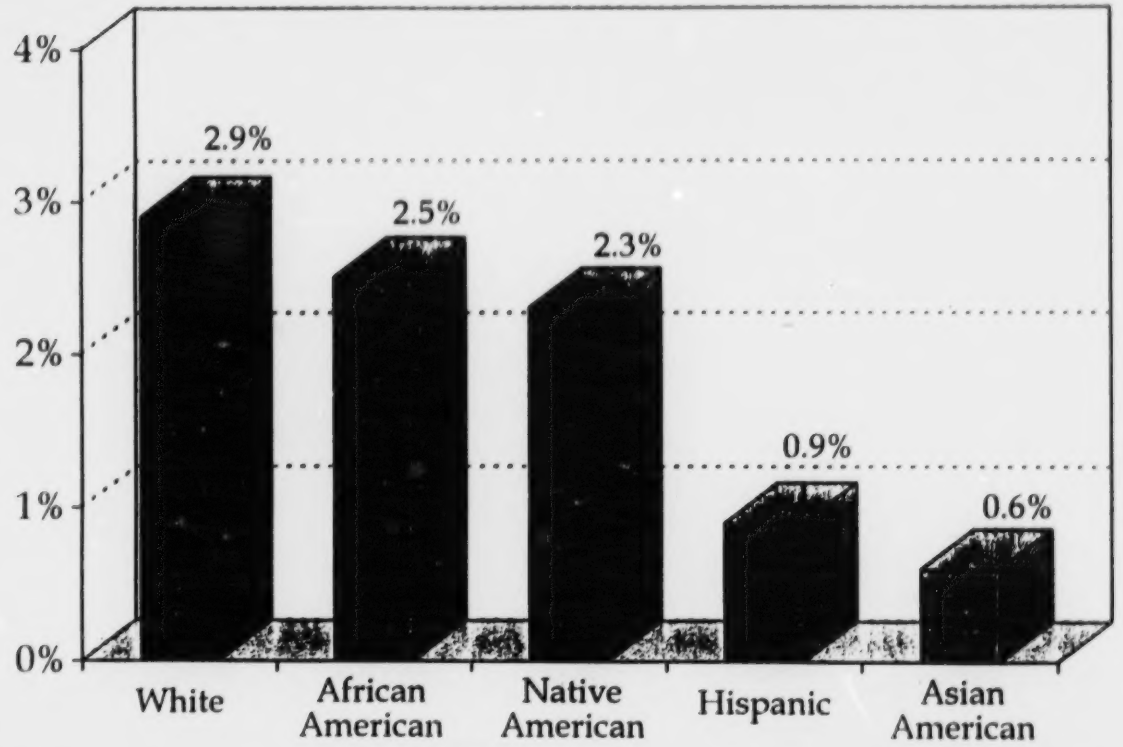
Chart 4

Adult Women Who Drink Heavily*
by Race and Ethnicity



40

41

* Drinking heavily is having at least 60 drinks in the past month.
Source: 1993 National Household Survey on Drug Abuse

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related problems rose."[18] Today, the ratio of alcohol abuse or dependence among men and women ages 65 and older is 4.4 to 1, but the ratio is only 2.2 to 1 among men and women ages 18 to 29.[19]

Women who work outside the home are 67 percent more likely to drink heavily than homemakers (S).** However, the most important work-related risk factor for heavy drinking among adult women is unemployment (S) (CHART 5). A working woman who is unemployed is more than 400 percent likelier to drink heavily than a woman who is working full- or part-time (S). Drinking problems may lead to unemployment for these women and, in turn, unemployment may cause or aggravate drinking problems.

Marital Status

Marital status is another factor in drinking patterns. Women who have never been married (particularly those living with a partner) are 50 percent likelier to drink heavily than married women (NS) (CHART 6).[20] Widows are three times more likely than married women to drink heavily (6.2 percent vs. 1.9 percent) (S), which suggests that they are an important target for prevention.[21] The impact of divorce on women's drinking is complex. When women with alcohol problems divorce, their drinking often subsides, especially if their partner is also a problem drinker.[22] But when women without alcohol problems divorce, their drinking often increases.[23]

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* This study (Wilsnack, et al, 1986) defines "heavy drinking" as having five or more drinks in a row at least weekly during the past year.

** Homemakers are assumed to be employed full-time at home.

Genetics, Family and Personal Experience

Genetics play a strong role in alcoholism among men, but the research among women is sparse and inconsistent.[24] So far, the influence of genes appears equally or less powerful among women. Nevertheless, female alcoholics are *more* likely than male alcoholics to have a family history of alcoholism.[25] The extent to which family, other environmental factors and genetics influence women demands intensive research since assessing the significance of each factor is important in crafting prevention and treatment strategies.[26]

◆ *Alcoholic women are more likely to have been beaten recently by a partner than non-alcoholic women. Women in treatment for alcoholism are four times more likely to have been abused by a partner.*[1]

◆ *Women who drink heavily are likely to have a partner who drinks heavily as well. Alcoholic women are five times more likely to have a spouse with alcohol problems than non-alcoholic women.*[2] *Unless her partner also seeks treatment, separation or divorce may be critical to a woman's ability to stay sober.*[3]

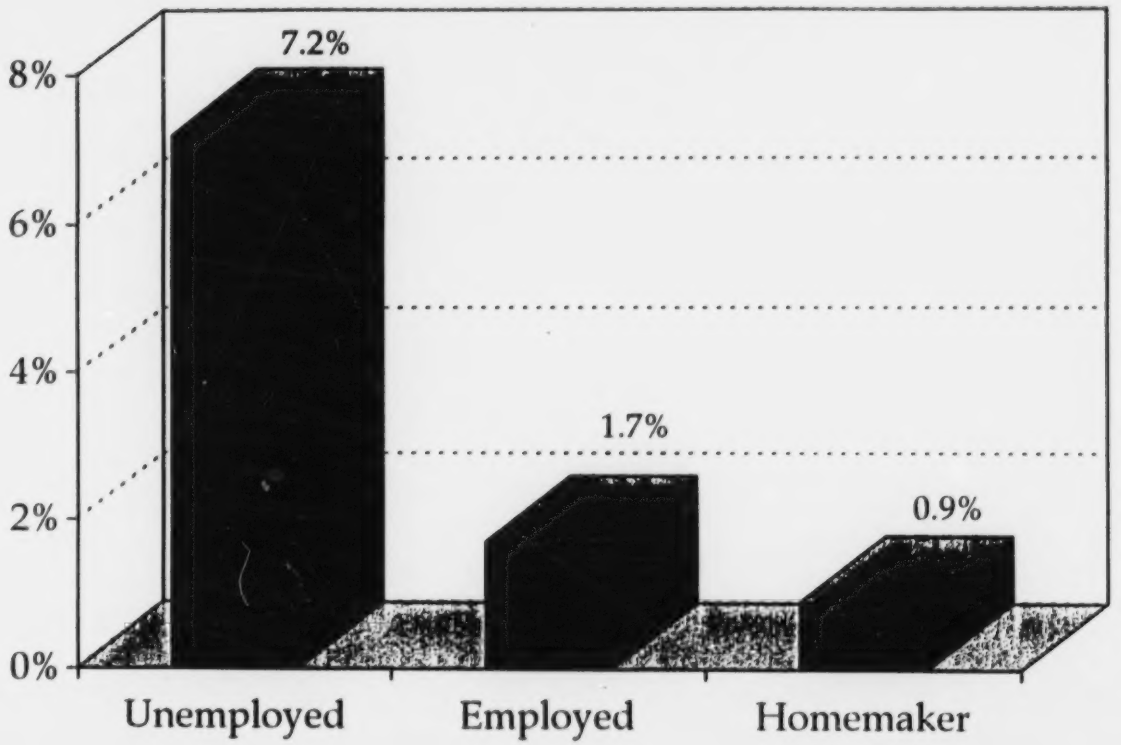
[1] Miller, B. A. and Downs, W. R. (1993). The impact of family violence on the use of alcohol by women. Alcohol, Health and Research World, 17(2), 137-143; [2] Miller, B. A., Downs, W. R. and Gondoli, D. M. (1989). Spousal violence among alcoholic women as compared to a random household sample of women. Journal of Studies on Alcohol, 50(6), 533-540.; [3] Blume, S. B. (1994). Gender differences in alcohol-related disorders. Harvard Review of Psychiatry, 2(1), 7-14.

A history of childhood abuse--and especially sexual abuse--may play as powerful a role in women's alcoholism as genetics.[27] Alcoholic women are twice as likely as non-alcoholic women to have been beaten or sexually assaulted as a child.[28] In one study, 69 percent of women in treatment reported being sexually abused as children, compared to 11.6 percent of men.[29] Roughly half of these women are victims of incest.[30]

Adding complexity to the diagnosis and treatment of their substance abuse problems, female alcoholics are much likelier than male alcoholics to have a mental health disorder in

Chart 5

Adult Women Who Drink Heavily*
by Employment Status



* Drinking heavily is having at least 60 drinks in the past month.
Source: 1993 National Household Survey on Drug Abuse

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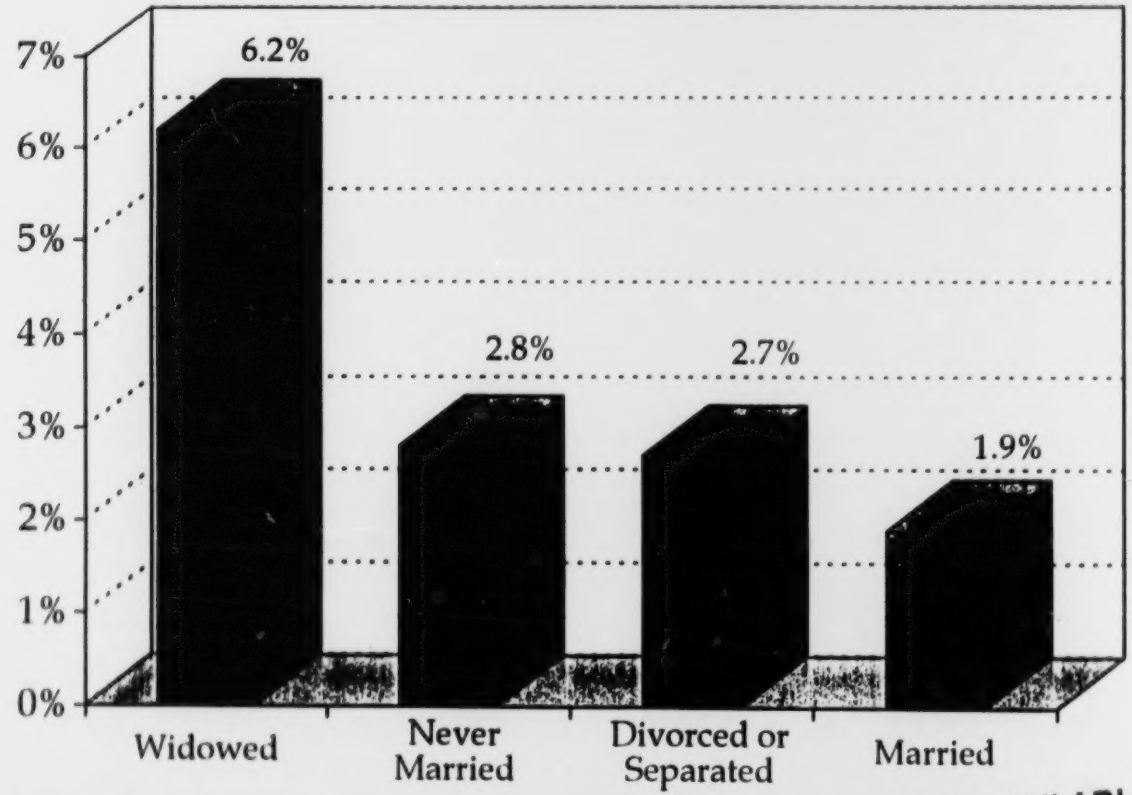
Chart 6

Adult Women Who Drink Heavily*
by Marital Status



* Drinking heavily is having at least 60 drinks in the past month.
Source: 1993 National Household Survey on Drug Abuse

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addition to their alcoholism (65 percent vs. 44 percent).[31] For women, the most frequent problem is depression, while for men, anti-social personality disorder (linked to aggression and criminality) is more common. Women's depression usually precedes the onset of their alcoholism; men's depression tends to follow it. Eating disorders such as bulimia or anorexia are also found more frequently in female alcoholics than in women without alcohol problems.[32]

Both female and male alcoholics report drinking to escape life pressures, but women more often report feeling powerless and inadequate before problem drinking.[33] Alcoholic women are also more likely to say their heavy drinking followed a crisis, such as a miscarriage, divorce, unemployment or the recent departure of a child from the home (an "empty nest").[34] It is unclear how often these events precede women's drinking and how often drinking causes or contributes to them. But women who lack a personally fulfilling and socially accepted role in life are at much higher risk for alcoholism than women who are happily employed, whether inside or outside the home, or both.[35]

Tobacco

In 1994, 21.5 million women (22.1 percent) and 24.6 million men (28.0 percent) age 18 and older smoked cigarettes (CHART 7). Most want to quit; in a 1993 survey, almost three-fourths of female smokers (72.7 percent) and two-thirds of male smokers (67.1 percent)

said they would like to stop.[36] They are about equally likely to succeed; 69 percent of women and 65 percent of men who have ever smoked managed to quit.*

Why Women Smoke

Though smoking became popular among men early in the 1900s, women did not take up the habit in large numbers until World War II.[37] The rate of smoking among men peaked at more than 60 percent in the 1950s, when evidence of smoking's harmful effects began to emerge. But the rate among women did not peak until 1965--at 33.9 percent--when the Surgeon General issued his report on smoking, initiating a long-term decline in smoking rates that has been less dramatic among women than men.[38]

One reason for the slower decline among women is that soon after the Surgeon General's report, tobacco companies introduced new advertising campaigns to recruit female smokers.[39] They tailored ads to the modern woman, most saliently in the Virginia Slims campaign, and placed them in women's magazines, which then rarely reported new evidence that smoking could be deadly for women.[40] These ads have been linked to sharp increases--110 percent among 12-year-olds and 35 percent among 17-year-olds--in the rate at which girls started smoking from 1967 to 1973; in contrast, the initiation rate among boys did not change.[41] By 1975, more girls than boys were smokers.[42] Because of a surge in boy's smoking during the late 1980s, girls and boys are now equally likely to smoke (12.0 percent vs. 11.9 percent).[43]

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* The percentage of smokers who have quit is the number of former smokers divided by the number of current and former smokers. Former smokers have not had a cigarette during the past month.

Chart 7

Adult Women and Men Who Smoke*

	Current**	Former**	Never
Women	22.1%	48.9%	29.0%
Men	28.0	52.6	19.4

* The 1994 NHSDA data classifies adults as 18 and older.
** Current smokers have smoked in the past month; former smokers smoked more than a month ago.
Source: 1994 National Household Survey on Drug Abuse

Both girls and boys cite their peers' smoking as a reason they start to smoke.[44] Receptivity to tobacco advertising may also affect their decision.[45] But girls in particular are likely to smoke to control their weight.[46] Among white teens who smoke, girls are three times likelier than boys to smoke to reduce their appetite.[47] Such worries about weight gain persist in adulthood; women who smoke are more than twice as likely as men to cite weight concerns as a reason not to quit.[48] The belief that quitting smoking will lead to weight gain is accurate.[49] One study found that over 10 years, women who quit gained 11 pounds more on average than those who continued to smoke.[50]

Andrea Lampson, age 13, believes effective antismoking ads must feature real-life stories. If she could design one herself, it would show children talking about a parent who died from smoking--"not actors, but real people who know how much it hurts." The quiet eighth-grader expresses concern about her mother's smoking. Yet Andrea confesses she recently considered taking up smoking herself to lose weight. "It speeds up your metabolism," she says.[1]

[1] Ono, Yumiko. Teenagers tell which antismoking ads work. Wall Street Journal, 8/30/95, p. B1.

Economic Status and Education

For women and men, smoking rates decrease as income rises. A woman whose income is below $15,000 is almost twice as likely to smoke as a woman with income of $75,000 or more (S) (CHART 8). Smoking is also less common among more educated individuals.[51] Women who drop out of high school are three times likelier to smoke than those with graduate degrees (S) (29.7 percent vs. 9.3 percent).[52] Adults of any income and education are equally likely to start smoking--but as they gain income or education, they are

more likely to quit. As a result, primary prevention efforts should reach all income and education levels, while quitting campaigns can be more focused.

Race and Ethnicity

Native American women are most likely of all women to smoke (S) (CHART 9); seven out of eight have smoked, and less than half (43 percent) quit. Asian American women are least likely to smoke (S); three-quarters of them never even start, and among those who do, more than half (54 percent) quit. Smoking is slightly more common among African American than white women (27.0 percent vs. 23.8 percent) (NS).[53] Though black women are less likely than white women to start, fewer black women quit than white women (57 percent vs. 68 percent) (S). Black women are also less likely to quit than black men (63 percent), which suggests a need for cessation programs that focus on black women.[54]

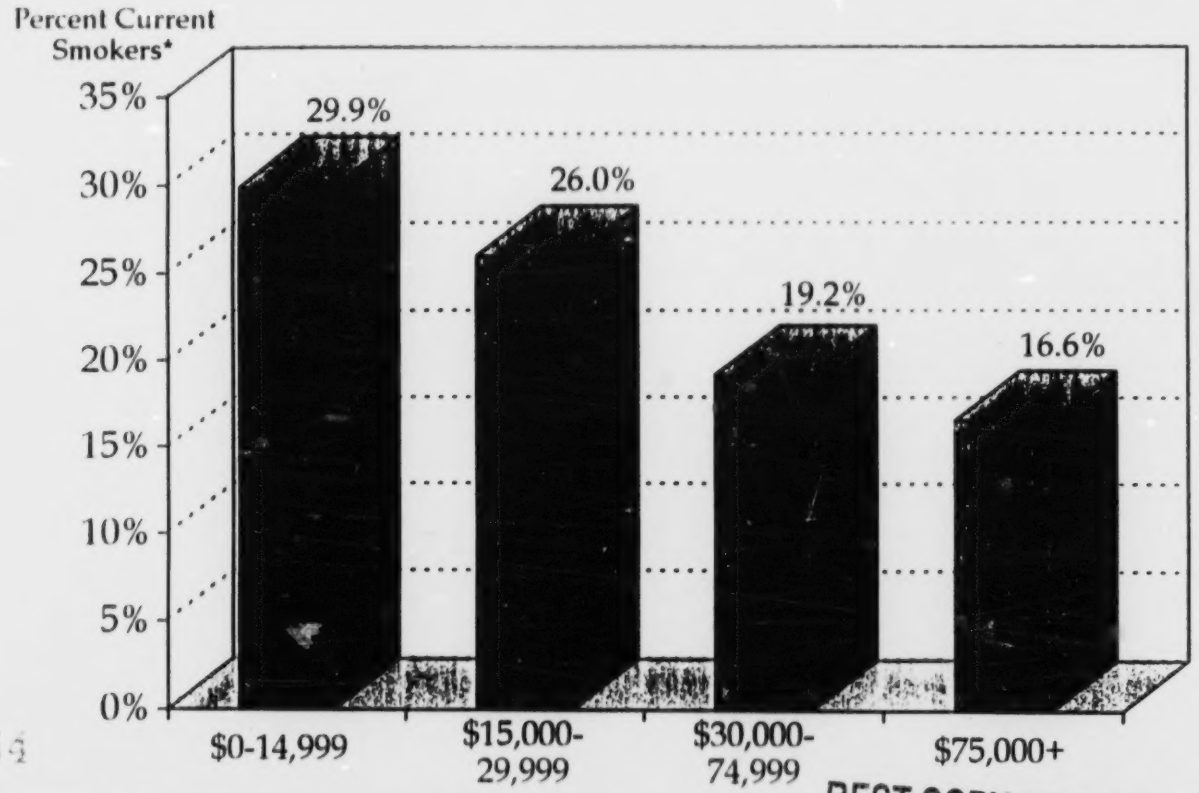
While smoking declined moderately among white high school seniors during the 1980s,* it appears to have dropped dramatically from 22.3 percent to 7.1 percent among black females and from 23.6 percent to 8.6 percent among black males.[55] In 1993, the National Household Survey on Drug Abuse reported that only 5.0 percent of black girls and 4.8 percent of black boys smoked; rates among white teenagers were almost three times higher (S) (CHART 10). Because this survey is self-reported and does not include those not in the home, and since it may not accurately reflect rates among the most disadvantaged, these numbers for smoking among blacks may be too low. Nevertheless, religious participation, perception of smoking as a "white" social norm, reaction against the blatant

* Smoking rates in this study (Bachman, Wallace, et al, 1991) are averages for 1976-1979 and 1985-1989.

Chart 8

Adult Women Who Smoke

by Household Income



* Current smokers have smoked in the past month.
Source: 1993 National Household Survey on Drug Abuse

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Chart 9

Adult Women Who Smoke

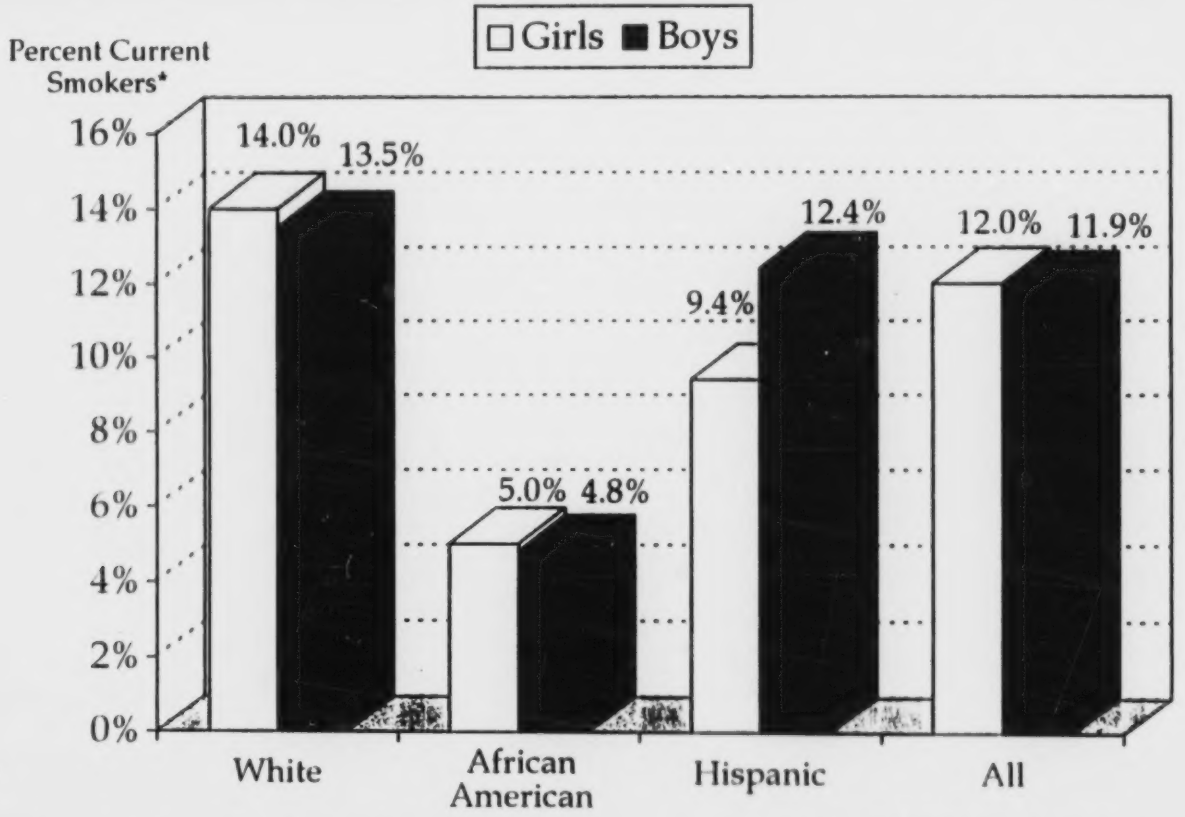
by Race and Ethnicity

	Current*	Former*	Never
White	23.8%	50.9%	25.3%
African American	27.0	35.3	37.6
Hispanic	19.2	30.8	50.1
Asian American	12.6	14.7	72.8
Native American	49.6	37.5	12.9

* Current smokers have smoked in the past month; former smokers smoked more than a month ago.
Source: 1993 National Household Survey on Drug Abuse

Chart 10

Adolescents Who Smoke
by Race and Ethnicity



* Current smokers have smoked in the past month.
Source: 1993 National Household Survey on Drug Abuse

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targeting of black youth by tobacco companies and the lower priority black girls give to thinness may discourage many black teens from smoking.[56] The decline among black teenagers now may be enduring among black women ages 18 to 24. One study reported a decline in smoking rates in this group from 27.1 percent in 1978 to 8.3 percent in 1993.[57]

But the jury is still out. Black women appear to be more likely than white women to take up the habit as adults. More than one in six (17.8 percent) black female smokers say they began after age 20, while fewer than one out of ten (9.8 percent) white female smokers say they began after that age (S). Almost one out of ten (9.1 percent) black female smokers say they started after age 25, but few (2.5 percent) white female smokers say they started after that age (S).

Illicit Drugs

Fewer women than men have used illicit drugs in their lifetime (S) (CHART 11). Women and men ages 19 to 40 are equally likely to have used marijuana (and no other illicit drug) (26.3 percent vs. 25.5 percent). But women in this age group are still less likely than men to have used other illicit drugs such as cocaine and heroin (27.6 percent vs. 38.5 percent) (S), and to be regular users of any illicit drug (5.3 percent vs. 12.6 percent) (S).

However, women are not immune to the lure of "hard drugs." The surge of cocaine use among middle and upper class women during the 1970s and the crack cocaine epidemic among poor women in the 1980s narrowed the gender gap in illicit drug use.[58] From 1960 to the late-1970s, the percent of drug addicts who were women doubled (from 14 to 30).[59] During the 1980s, their numbers rose even more rapidly. From 1985 to 1989, the number of

women seeking treatment for crack cocaine at Phoenix House in New York City almost tripled.[60]

Some 40 percent of all crack addicts are women.[61] Experts attribute its popularity among women to its cheap price, their preference for smoking a drug rather than injecting one, and the sense of confidence that crack temporarily delivers.[62] Since the beginning of the crack epidemic, women's involvement in drug trafficking also has risen.[63]

Women with higher incomes are most likely to experiment with illicit drugs, but regular drug use is most common among those in poverty (S) (CHART 12). Almost half (45.6 percent) of women with incomes of at least $75,000 have ever used illicit drugs, but relatively few (1.9 percent) report regular use. White women are more likely than black or Hispanic women to have ever used illicit drugs (S), but the

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◆ *Female drug addicts are more likely than male addicts to have a partner who uses illicit drugs.*[1]

◆ *Many women say a man introduced them to drugs, while men more often began with male peers. In one study, 33 percent of female heroin addicts said a male friend, spouse or partner influenced their decision to use narcotics. Only 2 percent of male addicts said a woman influenced their decision.*[2]

◆ *Female addicts are more likely to be depressed.*[3] *A survey of cocaine users found women twice as likely (37 percent vs. 14 percent) to say cocaine made them feel confident and sociable. Men were more likely (42 percent vs. 26 percent) to cite physical energy and the sense of a controlled high as cocaine's appeal.*[4]

◆ *Female drug abusers and addicts are four times more likely to have suffered sexual assaults than women without drug problems.*[5]

[1] Lex, B. W. (1995). Alcohol and other psychoactive substance dependence in women and men. In M. V. Seeman (Ed.), Gender and psychopathology (pp. 311-358). Washington, DC: American Psychiatric Press. [2] Hser, Y. et al. (1987). Sex differences in addict careers: Initiation of use. American Journal of Drug and Alcohol Abuse, 13(1), 33-57. [3] Lex, B. W. (1995). [4] Erickson, P. G. et al (1989). Sex differences in cocaine use and experiences. American Journal of Drug and Alcohol Abuse, 15(2), 135-152. [5] Winfield, I. et al. (1990). Sexual assault and psychiatric disorders among a community sample of women. American Journal of Psychiatry, 147(3), 335-341.

Chart 11

Adult Women and Men Who Have Ever Used Illicit Drugs*

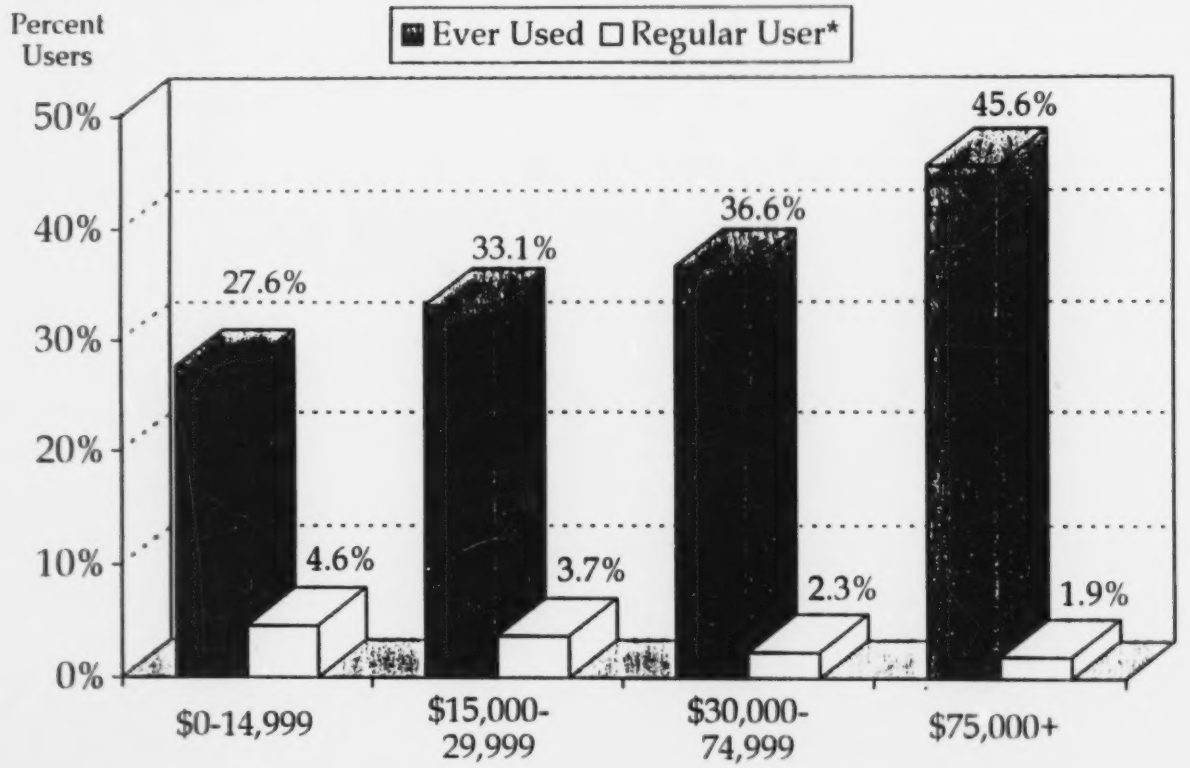
by Age

Age	Women	Men
19-30	53.5%	59.2%
31-40	54.3	69.2
41-59	26.9	39.9
60+	4.1	10.9
All	33.9%	45.6%

* Cocaine (including crack), heroin, hallucinogens (including LSD), marijuana and hashish, and the non-medical use of sedatives, tranquilizers, stimulants, analgesics and inhalants.
Source: 1993 National Household Survey on Drug Abuse

Chart 12

Adult Women Who Use Illicit Drugs
by Household Income



* Regular users have used an illicit drug at least monthly in the past year.
Source: 1993 National Household Survey on Drug Abuse

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rates of regular drug use are similar among the three groups (NS) (CHART 13). Again, black women are more likely to be clustered at the extremes of abstaining or becoming regular users.[64]

The crack epidemic has been particularly devastating to some African American communities, snaring women and men alike and destroying families.[65] Black women are more than twice as likely as white women to be regular cocaine users (S) (CHART 14) and are 14 times likelier to use crack cocaine during pregnancy.[66] In terms of total numbers, white women who use drugs regularly (2.2 million) outnumber all those who are black, Hispanic or from other minority groups (846,000).

Women progress more quickly than men from trying a drug to getting hooked.[67] Female cocaine addicts are also twice as likely as male addicts to be unemployed, diminishing their access to treatment.[68] Thus, the female addict is more likely than her male counterpart to be sicker, and to lack the resources to get treatment and to support herself once she is drug-free.

Prescription Drugs

Despite the conventional view that women misuse prescription drugs to relieve anxiety, concrete data on the extent of the problem are hard to find.*[69]

What evidence does exist indicates that women and men are equally likely to misuse four types of prescription drugs: stimulants, tranquilizers, sedatives and analgesics--

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* Misuse of prescription drugs, also called "non-medical use," is use beyond or without a doctor's recommendation.

psychoactive drugs commonly prescribed for depression, anxiety, weight loss, insomnia and pain (CHART 15). Misuse is most common among young, white, low-income adults who are unemployed or working part-time. Contrary to the stereotype, among women with household incomes of $30,000 or more, homemakers are less likely to misuse prescription drugs than women who work full-time outside the home (NS).[70]

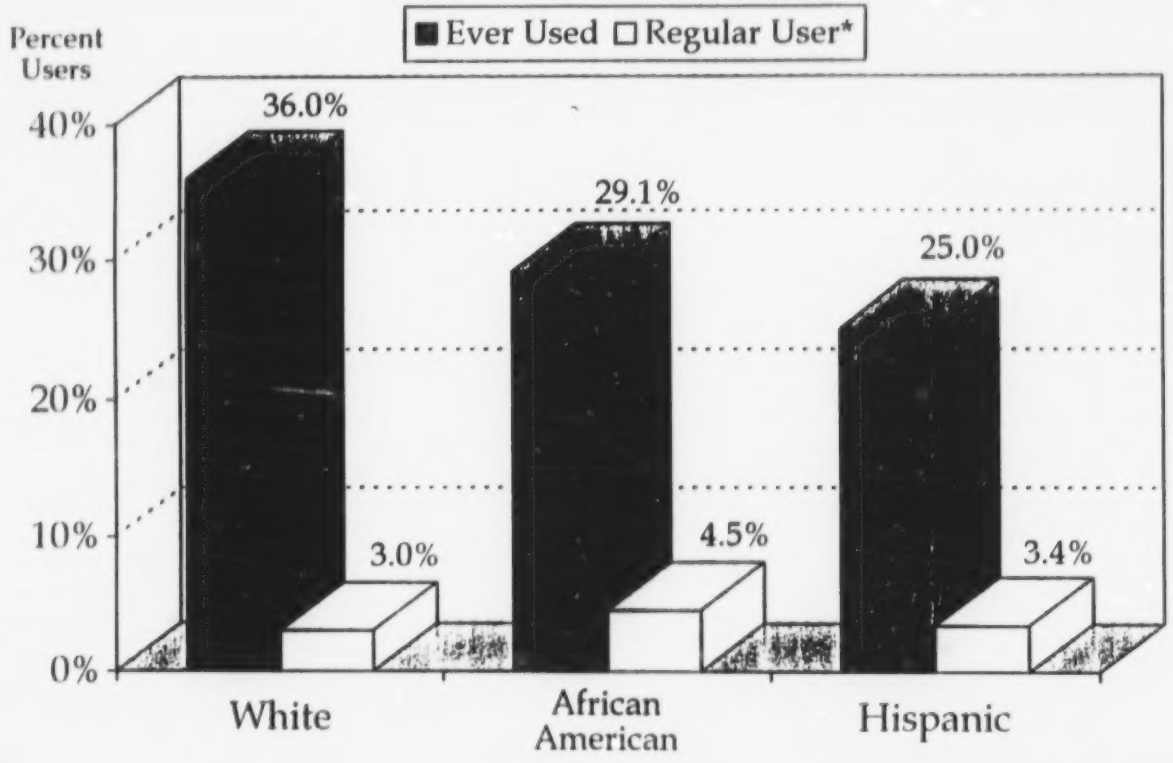
Non-medical use is only a small slice of the prescription drug problem. Women may suffer unintended or harmful consequences of chronic or dependent use of prescription drugs (even legally obtained), such as fainting, stupor or confusion, but not consider it "misuse" or "abuse." Women may also use drugs according to a doctor's advice, but combine them with alcohol, which may accelerate the onset of dependence and amplify the effects of the drug, leading to impaired motor skills and accidents.[71] Female alcoholics often combine their alcohol with prescription drugs like tranquilizers and sedatives.[72]

Women receive two-thirds of all prescriptions for tranquilizers and anti-depressants.[73] This is largely because women account for almost two-thirds of all visits to doctors, and because they are almost twice as likely as men to suffer depression.[74] One of eight women suffers depression each year, compared to one of 13 men.[75] Elderly women are especially vulnerable; 4 million of those over age 65 are depressed, compared to 2 million men.[76]

Because female alcoholics are more likely than male alcoholics to suffer depression in addition to their addiction, doctors may medicate a woman's depression but miss the signs of alcohol abuse, and they may contribute to such abuse by adding to the array of drugs at her

Chart 13

Adult Women Who Use Illicit Drugs
by Race and Ethnicity



* Regular users have used an illicit drug at least monthly in the past year.
Source: 1993 National Household Survey on Drug Abuse

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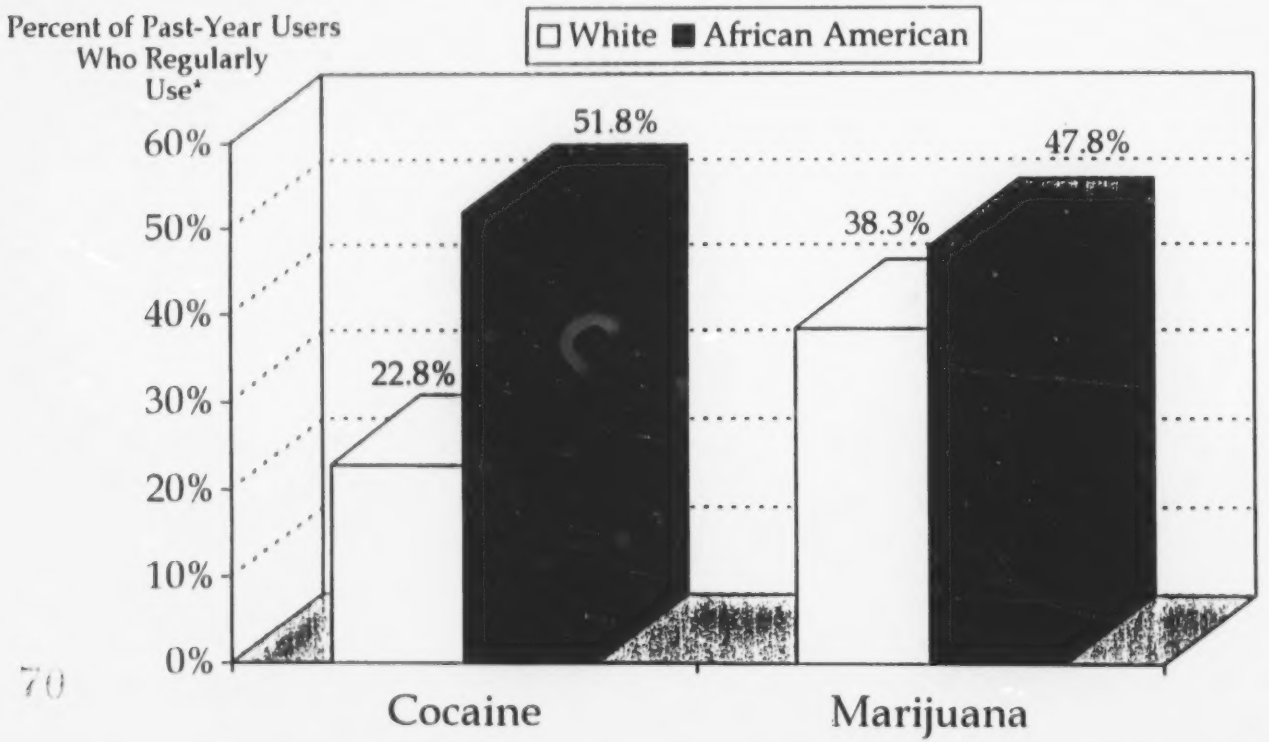
Chart 14

Drug-Using Adult Women Who Regularly Use Drugs



70

71

* Regular users have used the drug at least monthly in the past year.
Source: 1993 National Household Survey on Drug Abuse

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Chart 15

Adult Women and Men Who Use Prescription Drugs Non-Medically*

by Age

Age	Women	Men
19-30	8.1%	9.9%
31-40	4.6	5.6
41-59	3.2	1.7
60+	1.7	1.2
All	3.7%	3.9%

* Use of stimulants, tranquilizers, sedatives and analgesics at least once in the past year.
Source: 1993 National Household Survey on Drug Abuse

disposal.[77] Education about this danger and training to detect the signs of substance abuse in women would help doctors avoid this costly mistake.

Doctors can overprescribe drugs to women if they too casually attribute women's medical complaints to emotional causes.[78] Doctors have been found to attribute headaches to mental and nervous conditions in women more than in men, and to decide that women who complain of digestive, reproductive, nervous and mental symptoms are not really sick, compared with men who make similar complaints.[79] Even after controlling for patient symptoms and physician diagnosis, women have been found 37 percent more likely to get a prescription for an anti-anxiety drug and 82 percent more likely to get an anti-depressant.[80]

The risk of inappropriate prescriptions or uses of prescription drugs is especially high among elderly women.[81] Two-thirds of all long-term users of tranquilizers are women and a third of them are over age 64.*[82] One-fifth of nursing home residents--75 percent of whom are women--receive anti-psychotic drugs, usually to ease behavioral problems related to dementia, often when non-pharmaceutical actions would suffice.[83]

Alcohol abuse compounds the danger of prescription drug use. Many experts believe that alcohol abuse by the elderly is widely under-reported.[84] At Johns Hopkins Hospital in Baltimore, 21 percent of hospital inpatients age 60 and older met criteria for alcohol dependence. Yet doctors had diagnosed only 37 percent of these patients--and they failed to diagnose a single case of alcoholism in an elderly woman.[85]

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* Long-terms users have taken the drug for 12 months or more.

Adolescence: Where It All Begins

Unlike adult women and men, girls and boys are often indistinguishable in their rates of alcohol and drug use. Since 1975, adolescent girls have been equally or more likely than boys to smoke.[86] Today girls and boys are just as likely to smoke (12.0 percent vs. 11.9 percent), to quit (26.2 percent and 26.0 percent), or to avoid smoking (61.8 percent vs. 62.1 percent).[87]

Adolescent girls and boys are also equally likely to drink (18.5 percent vs. 17.8 percent).*[88] Though girls are still less likely than boys to binge drink, the gap has narrowed since 1975.[89] Most of the remaining difference stems from less beer drinking by females. Girls are less likely than boys to binge on beer (16 percent vs. 36 percent) and hard liquor (13 percent vs. 22 percent), but equally likely to binge on wine (5 percent). Girls are more likely to binge on wine coolers (10 percent vs. 7

Patterns of drug and alcohol abuse differ among younger and older women in ways that may signal important cultural changes. A study of 572 women in treatment for alcohol and/or drug addiction found:[1]

- *Women under age 35 are more likely to use an array of drugs, while those age 35 and over commonly use only one or two, such as alcohol and painkillers. On a weekly basis, younger women are nine times likelier to use marijuana, six times likelier to use stimulants and five times likelier to use cocaine.*

- *Younger women are four times likelier to have begun drinking before age 16, and 15 times likelier to have tried illicit drugs by age 15.*

- *79 percent of older women usually or always use alcohol or drugs by themselves, compared to less than half (47 percent) of younger women.*

[1] Harrison, P. A. (1989). Women in treatment: Changing over time. International Journal of the Addictions, 24(7), 655-673.

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* NHSDA data on adolescents, collected in homes with a parent present, understate the overall problem. For example, the 1990 Youth Risk Behavior Survey, conducted in schools, found that among students in grades 9 through 12, 61 percent of boys and 55 percent of girls drink.

percent). The degree of similarity varies by race and ethnicity.[90] Hispanic girls are less likely than Hispanic boys to drink at all (14.7 percent vs. 22.2 percent) (S), though Mexican and Cuban American girls are catching up.[91]

The gap between girl's and boy's illicit drug use has closed in the last 30 years, but boys are still more likely to become regular users.[92] While men ages 31 to 59 are 1.5 times more likely than women in that age group to have used illicit drugs other than marijuana (S), in the 19 to 30 age group, the rate is only 1.3 times higher for men, and the rates are equal (12.7 percent vs. 12.6 percent) for adolescent girls and boys (S) (CHART 16).

The age at which tobacco, alcohol and illicit drug use begins has declined significantly in the last 30 years.[93] For example, among adult women and men who have used marijuana, those who are 45 years old or above started smoking marijuana on average during their middle or late 20s, while those 19 to 44 years old began at about age 17 (CHART 17). On average, adolescents now start to smoke at age 13 and to drink at age 15. By age 12, 15 percent of all girls and boys have tried cigarettes; by age 14, the percentage has doubled to 30 percent, and by age 18 it has doubled again to almost 60 percent.

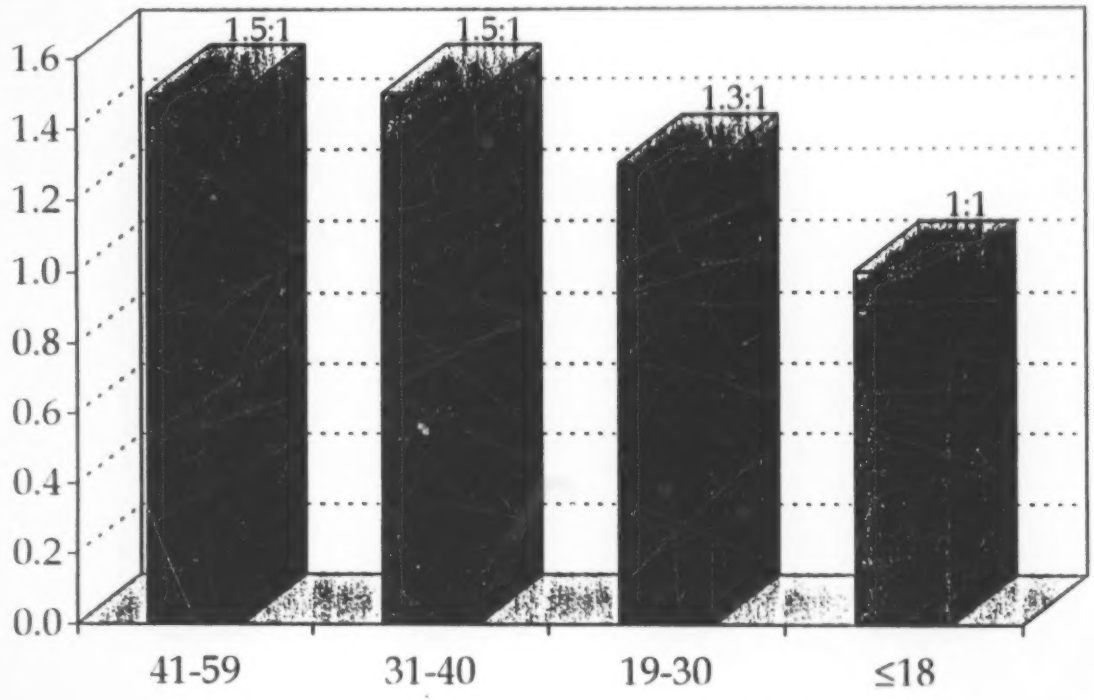
Experimentation at such young ages is a concern for all adolescents, but it is most ominous for girls.[94] In older generations, women were more likely to try their first cigarette, drink or illicit drug at a later age than men. This is one reason women were less likely to become regular users;[95] they started when they were more mature and less vulnerable to the temptation and pressure to smoke and get high or drunk. But over the last

30 years, this protective factor has vanished. Girls and boys are now wading into drugs, alcohol and tobacco at the same early ages.

Chart 16

The Declining Gender Gap in Rates of Illicit Drug Use

Ratio of Male to Female Rates of Use of Illicit Drugs Other Than Marijuana*



* Those who have ever used illicit drugs other than marijuana.
Source: 1993 National Household Survey on Drug Abuse

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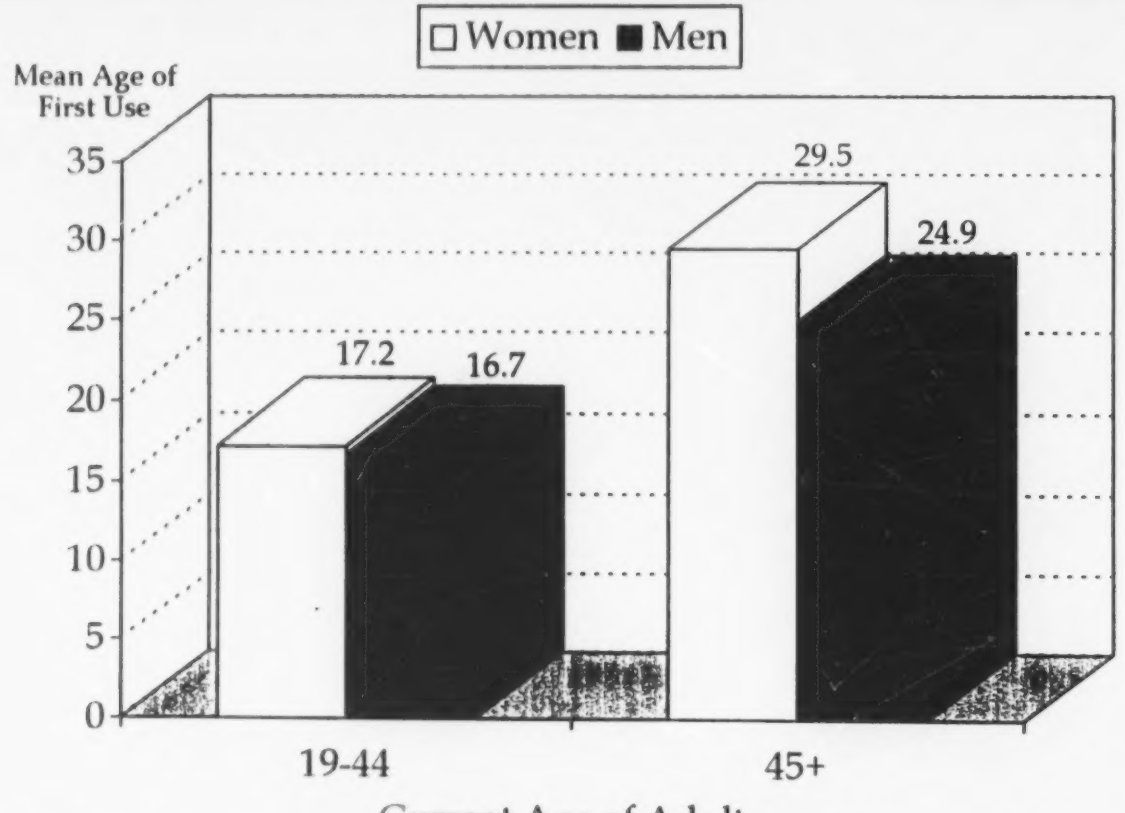
Chart 17

Age at Which Women and Men First Used Marijuana



Source: 1993 National Household Survey on Drug Abuse

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III.

Damage and Death: The Truth and Consequences for Women

Women who smoke, abuse alcohol or use illegal drugs suffer the same consequences as men, but for women the harsh truths of addiction, illness, violence and death come more quickly, and the social stigma is more severe.

Alcohol

Illness and Death

Women feel the physical effects of alcohol, become addicted and develop alcohol-related illnesses, such as liver damage, hypertension, anemia, malnutrition, peptic ulcer, brain and heart damage, more rapidly than men.[1] Women who drink are more likely than men to develop liver cirrhosis, to develop it at an earlier stage of problem drinking and at lower levels of alcohol consumption.[2] Female alcoholics are up to twice as likely to die as male alcoholics in the same age group (who in turn die at rates three times above the general population), and a greater percentage of alcoholic women than men die from alcohol-related accidents, violence and suicide.[3]

A follow-up of 100 women 11 years after being hospitalized for alcoholism found that a third of them had died, primarily of alcohol-related causes such as pancreatitis, hepatic

cirrhosis and other liver disorders, violence and accidents.[4] On average, their lives were 15 years shorter than women in the general population.

More than 9,000 women die each year from liver cirrhosis, accounting for one third of such deaths; alcohol is the cause or a major contributor in virtually all cases.[5] According to the NIAAA, the risk of liver cirrhosis becomes significant for men who drink more than six drinks per day (80 grams of pure alcohol), but that risk becomes significant for women at less than two drinks per day (20 grams of alcohol).[6] This phenomenon, known as "telescoping," may be due in part to the body weight and metabolic differences that, on average, cause women who drink roughly half of what men drink to have the same amount of alcohol in their blood.[7] That's why one expert concluded, "It is now clear that an alcohol intake that may be considered moderate and innocuous in men is not necessarily so in women."[8]

Although the rate of heavy drinking is about the same for black and white women, cirrhosis mortality is 73 percent higher among black females than white females (8.3 vs. 4.8 per 100,000 individuals), suggesting that black women are more susceptible to alcohol's deadly consequences.[9] Black alcoholic women suffer death rates that are nearly double those of white women.[10] In the general population, black women's mortality from alcohol-induced causes in 1990 was 7.7 per 100,000, compared to 2.8 for white women.[11]

A possible reason for the higher alcohol-related death rate among black women is that among women who frequently drink heavily, black women may have more drinks per month than do white women."[12] The proportion of heavy drinkers among black women peaks at a

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* In this study, frequent heavy drinkers have five or more drinks at a sitting at least once a week.

later age (45-59) than among white women (25-44), which could indicate that black women are sustaining their heavy drinking for more years of their life.[13] The higher concentration of poverty among African Americans is also a contributing factor.

For all alcoholics, drinking affects the brain in ways that impair learning, memory, abstract thinking, problem-solving, perceptual-motor skills (such as eye-hand coordination) and ability to analyze spatial relationships.[14] But women suffer these impairments after fewer years of drinking.[15]

Some studies have found that women who have two or more drinks per day are 1.3 to 2.0 times more likely to get breast cancer than abstainers.[16] But these studies rely on statistical correlations; research has not yet established a causal link.[17]

Heavy drinking can also impair a woman's endocrine system and lead to menstrual irregularities, amenorrhea (the absence of menstrual cycles), infertility and early menopause.[18] This underlines the importance of preventing alcohol abuse among teenage girls, whose bodies are just developing.[19]

Moderate drinking appears to protect some women against heart disease, possibly stemming from an increase in estrogen that such drinking may cause.[20] Caution is important, however, in drawing conclusions about the benefits of drinking by women. While light to moderate drinking by men reduces mortality due to heart disease, the increased risk of liver cirrhosis (and possibly breast cancer) among women complicates the equation for them.[21] In a study of 85,709 women, alcohol consumption appeared to lower mortality among women who drank one to 16 drinks per week.[22] Above that, liver cirrhosis and breast cancer increased mortality rates. Moreover, any protective effect was limited to

women over age 50 and those at high risk of heart disease due to hypertension, diabetes, smoking, high cholesterol or a family history of heart attacks.

Women who drink less than men and do not consider themselves heavy drinkers may nevertheless experience a variety of health and social consequences.[23] In a study of binge drinking among college students, women were 30 percent more likely than men to experience a hangover, but they were less likely to describe themselves as heavy drinkers (8 percent vs. 22 percent).*[24] And even though some women drank less than men, they were just as likely as men to experience alcohol-related problems such as missing classes, falling behind in their studies and feeling regret about drinking.[25] They were almost as likely to get injured while drinking, to have unplanned sex and to have it without a condom.[26]

Sex

Among teenage girls, alcohol use is strongly associated with unprotected sex.[27] Adolescent girls who drink more than five times a month are five times likelier to be sexually active and a third less likely to have sex with a condom than girls who do not drink (S) (CHARTS 18 and 19). In contrast, adolescent boys' drinking appears to have little relationship to whether they use condoms (S). The link between female drinking and unprotected sex is more pronounced with first-time encounters.[28] Two-thirds of women who drank at the time of their first sexual intercourse said they did not use contraception, while nearly half of those who did not drink used contraception.[29]

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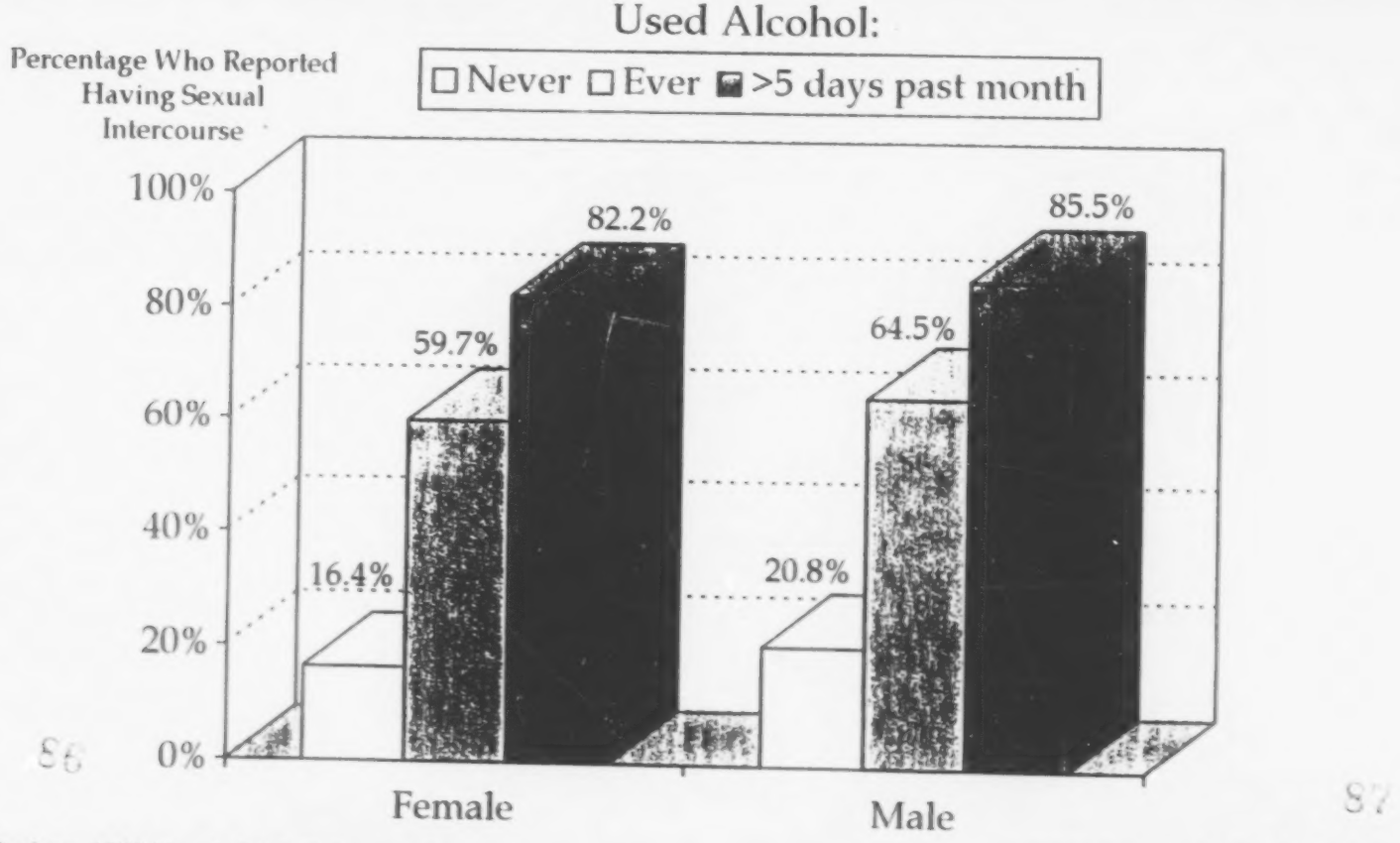
* Female binge drinkers consumed four or more drinks in a row at least once during the past two weeks. Male binge drinkers had five or more drinks in a row at least once during the past two weeks.

Chart 18

Sexual Activity Among Adolescents
Ages 12-19



Source: 1993 Youth Risk Behavior Survey

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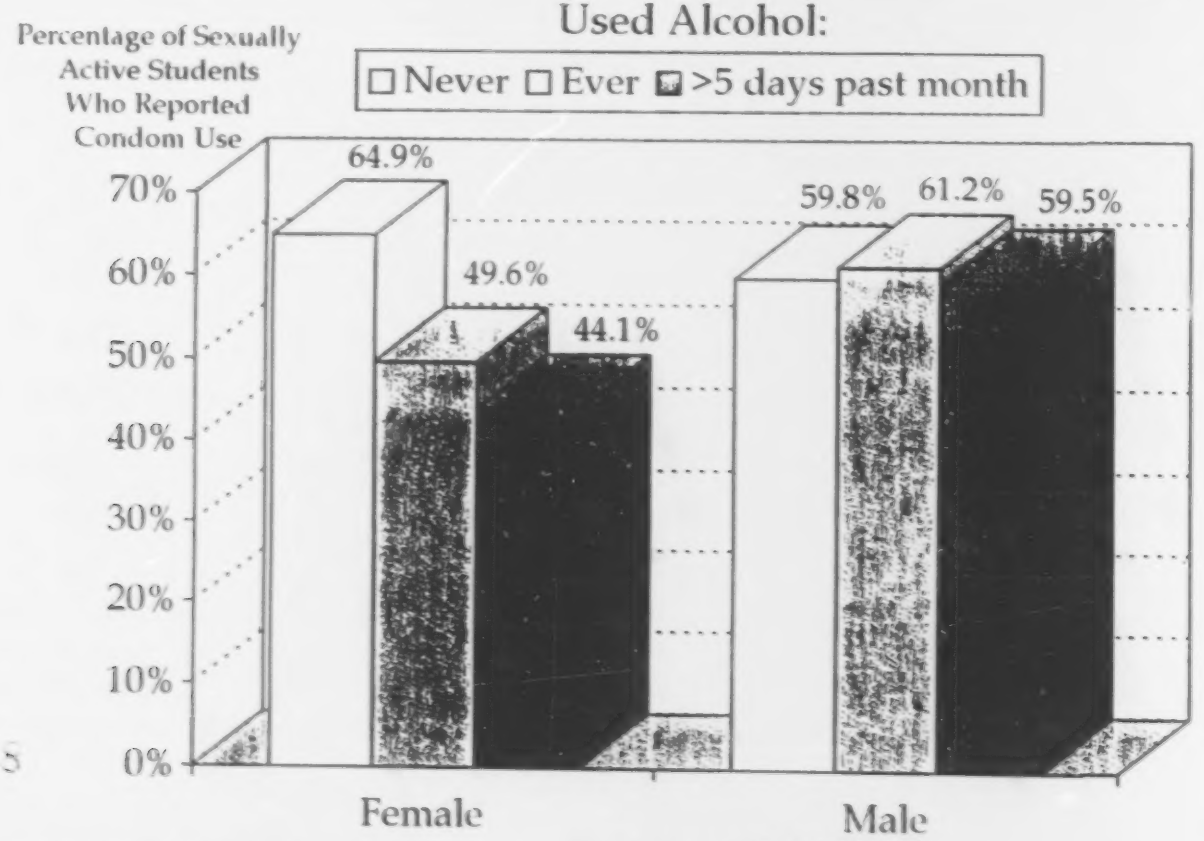
Chart 19

Condom Use Among Adolescents

Ages 12-19



Source: 1993 Youth Risk Behavior Survey

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This connection is perilous for females, given that they may get pregnant and have a greater chance of contracting the AIDS virus, which appears to be more easily transmitted from a man to a woman during heterosexual contact than from a woman to a man.[30] They may also catch other sexually transmitted diseases (STDs) such as syphilis, genital herpes, chlamydia, gonorrhea, human papillomavirus and chancroid.[31] Females 15 to 19 years old have the highest rates of gonorrhea among women.[32] The potential consequences of STDs include pelvic infections, tubal infertility, and genital and cervical cancer--and if pregnancy occurs, ectopic pregnancy or neonatal transmission of STDs to the fetus, which can cause perinatal illness and even death.[33]

Whatever the combination of factors--the disinhibiting effect of alcohol, a romantic vision, the excitement of drinking and risky sex--the connection between alcohol and unsafe sex is so compelling that a successful effort to prevent alcohol abuse seems sure to reduce high-risk sexual behavior as well.[34]

The belief that alcohol is a disinhibitor or aphrodisiac has roots as far back as ancient Greece and Rome.[35] Yet while both genders tend to believe that alcohol facilitates sexual enjoyment, studies find that alcohol depresses physical sexual response.[36] Although women and men alike say that alcohol reduces tension in social situations, women often experience the opposite effect: their anxiety may increase when they drink and interact with men, possibly because they worry about the stigma attached to a woman who drinks.[37]

This gap between women's expectations regarding alcohol and sex and the physical reality can have negative consequences. Many alcoholic women in treatment report problems of sexual dysfunction, which usually preceded the onset of their heavy drinking.[38] They

may have used alcohol to "treat" the sexual problem--only to find out that it failed and probably aggravated the problem. Thus, women who expect alcohol to ease problems of sexual dysfunction may get into a self-reinforcing cycle in which they medicate the problem with alcohol and, finding that the problem has only grown worse, drink more.

Even when alcohol does disinhibit a woman, it is unclear how often this translates into promiscuity.[39] In one survey, 60 percent of women said that drinking made them feel less inhibited, but only 22 percent said that drinking made them become "sexually forward," and even fewer (8 percent) said they became less particular in choosing a partner.[40] Yet 60 percent said that when they had been drinking, someone *else* who had also been drinking had been sexually aggressive towards them.[41] These and other studies suggest that more than creating a sexually aggressive woman, a woman's drinking may encourage men's sexual assertiveness towards her.[42] Men tend to believe that a woman who is drinking is more sexually available than a woman who is not, and to view alcohol as a surefire social and sexual facilitator--that "candy is dandy, but liquor is quicker."[43]

A young woman told of how she agreed to go back to her date's house after a party. "We played quarter bounce [a drinking game]. I got sick drunk; I was slumped over a toilet vomiting. He grabbed me and dragged me into his room and raped me. I had been a virgin and felt it was all my fault for going back to his house when no one else was at home." Describing a separate incident, a young man said, "Alcohol loosened us up and the situation occurred by accident. If no alcohol was consumed, I would never have crossed that line."[1]

[1] Watson, R. R. (Ed.). (1994). Addictive behaviors in women. Totowa, NJ: Humana Press.

Violence

The consequences become brutal when assertiveness turns into sexual assault or other violence. The link between sexual assault, rape, marital abuse and other violence towards women when either the woman or man drinks is well-documented.[44] In up to three-quarters of all rapes and up to 70 percent of all incidents of domestic violence, either the victim, the perpetrator or both have been drinking.[45] An extensive national survey found that 74 percent of college students who had raped a woman and 55 percent of rape victims had been drinking prior to the incident.[46]

A study of spousal abuse among alcoholic and non-alcoholic women found alcoholic women nine times more likely to be slapped by their husband, five times more likely to be kicked or hit, five times more likely to be beaten and four times more likely to have their lives threatened.[1]

[1] Miller, B. A. et al. (1989). Spousal violence among alcoholic women as compared to a random household sample of women. Journal of Studies on Alcohol, 50(6), 533-540.

Alcohol may make violence more likely because a woman who drinks heavily may seem sexually available and more vulnerable to attack, and/or the man may think intoxication will provide an excuse for his aggression.[47] Both college women and men were found to consider a man who beats his wife less culpable if he'd been drinking--but they held a woman who had been beaten more responsible if she had been drinking.[48] Women and men in college also attribute less blame to a man who raped if he'd been drinking and more responsibility to a women for being raped if she'd been drinking.[49]

The link between women's drinking and spousal abuse may also stem from the fact that women who abuse alcohol often have male partners who drink heavily. Male drinking is a powerful predictor of wife abuse.[50] In 44 percent of marital assaults involving alcohol,

both spouses had been found to be drinking; in another 44 percent, only the violent spouse had been drinking; and in the remaining 13 percent, only the victim had been drinking.[51] Women often drink to cope with the trauma of being beaten, setting up a spiral of assault and alcohol abuse.[52]

"I married an alcoholic. I married him because I thought he was the only guy who would ever show me any attention. In those seven years, I put up with mental abuse, physical abuse and somewhat sexual abuse. The way that alcohol and marijuana played a role in my marriage--that was the only way of getting along with him. He was mean as a snake. He run me down onto the ground and start beating me. To relax, I drank, I smoked pot and go on into my own dream world. That's what the marijuana did, was put you in another dream state, where you would forget about all the pain and all the anger and all the abuse and get high. Until the next morning, and then it started all over again."[1]

[1] Smith, P. H. et al. (1995). Battered substance-abusing women. Raleigh, NC: North Carolina Governor's Institute for Alcohol and Substance Abuse.

Personal and Social Problems

Females are much more likely than males to report internal and personal correlates of alcohol abuse, such as depression, feeling isolated, anxious or irritable, and conflicts in marital or family relationships.[53] Males are likelier to cite outer-directed problems, such as trouble at work, financial difficulties and arrests for drunk driving.[54] Among adolescents in treatment for alcoholism, girls most often report histories of depression and suicide attempts, while boys commonly report being arrested or suspended from school.[55]

These differences in the way men and women see the consequences of their alcohol abuse have significant implications for prevention and treatment efforts. Not only do women have different issues to address in treatment, but their abuse or addiction may be harder to nip in the bud or recognize, given the lower visibility of its symptoms. Moreover,

researchers who attempt to gauge the extent of alcohol problems among women and men--and doctors who seek to detect them--may miss a substantial number of female cases if they focus solely on external manifestations such as getting arrested or job difficulties.[56]

Suicide. Suicide attempts are another deadly problem common among women who abuse alcohol.[57] Alcoholic women are almost five times more likely to attempt suicide than women of similar age and income who are not alcoholics (40 percent vs. 8.8 percent).[58] The dance of death between alcohol and suicide begins in adolescence, often before parents or other adults sense any danger.[59] Teenage girls who drink more than five times a month are almost six times likelier to attempt suicide than those who never drink (25.9 percent vs. 4.5 percent) (S) (CHART 20). Among adolescents in treatment for alcoholism and/or drug addiction, 30 percent of the girls report attempting suicide, compared to 15 percent of the boys; most girls (57 percent) had at least thought about suicide, while most boys (66 percent) had not.[60]

The typical teenage suicide *attempt* is by a girl who tries to overdose on drugs.[61] Boys are more likely to *commit* suicide, but the gap has been closing since 1980 as girls have used more lethal methods such as guns.[62] Among adult alcoholics, the suicide rate for women already equals that for men.[63]

An important factor in the link between suicide attempts and alcohol use among adolescent girls may be a history of sexual abuse. Some 35 percent of teenage girls in treatment for alcohol and drug abuse have been found to be sexually abused. Those who had been abused by a family member were 1.5 times more likely than those who had not to feel ashamed of themselves, more than twice as likely to express self-hate and almost three times as likely to attempt suicide.[1]

[1] Edwall, G. E. et al. (1989). Psychological correlates of sexual abuse in adolescent girls in chemical dependency treatment. Adolescence, 24(94), 279-288.

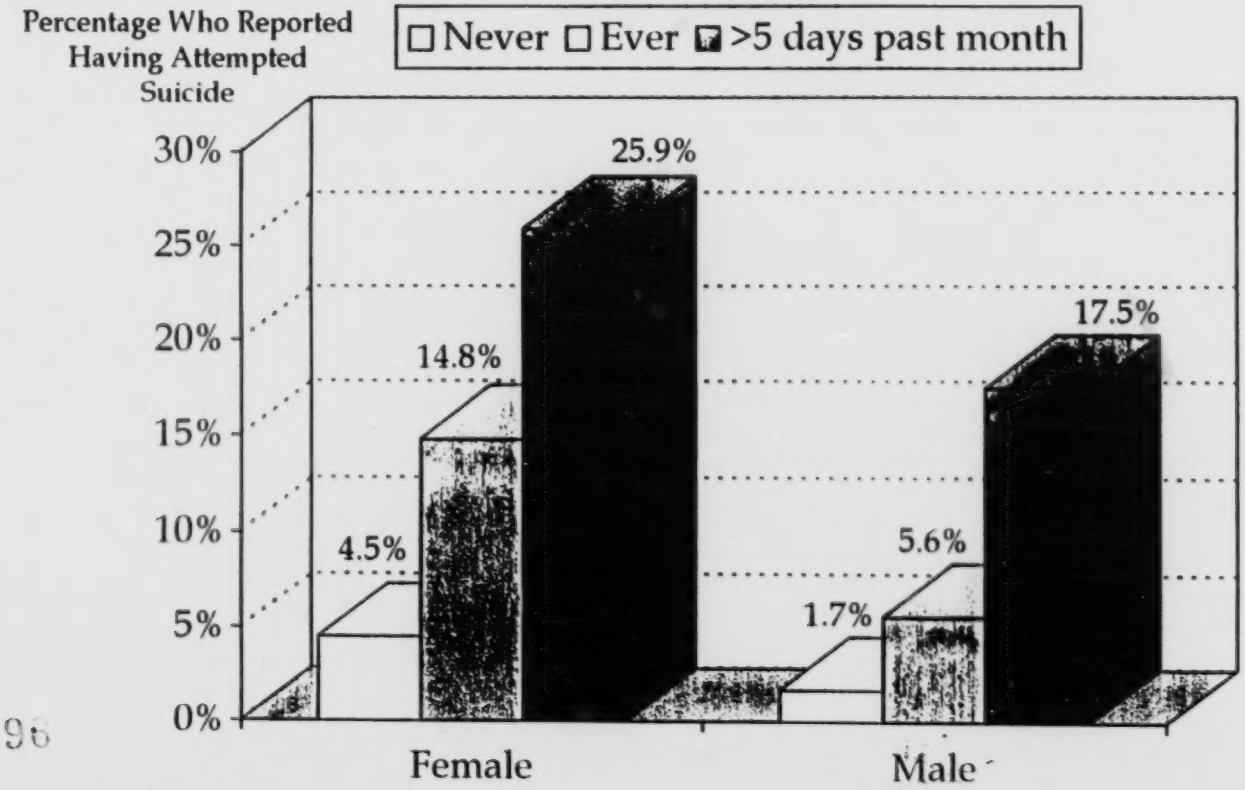
The Wrong Way

Gender differences in substance abuse-related problems are diminishing.[64] As female drinking becomes a more public event among younger women, drunk driving, problems with legal authorities and vulnerability to assault have risen as well.[65] In a comparison of female alcoholics ages 20 to 29 and those ages 40 to 49, the younger women are three times likelier to report getting drunk in public more than once (72 percent vs. 23 percent) and driving while drunk (68 percent vs. 22 percent), and five times likelier to experience blackouts (61 percent vs. 12 percent).[66] Among women in treatment for alcohol or drug abuse, those under age 35 are more likely than those age 35 and older to report problems at work, such as troubles with co-workers or supervisors, mistakes, absenteeism, tardiness or injury.[67]

While deaths among drunk drivers declined from 1982 to 1990, they dropped much less among women (4 percent) than men (15 percent).[68] Worse, drunk driving appears to be increasing among young women.[69] In North Carolina, the rate of alcohol-related crashes soared 74 percent between 1976 and 1985 among female drivers ages 18 to 20 (compared to a 27 percent drop for males), and almost doubled (up 93 percent) among those ages 21 to 24 (compared to a 7 percent drop for males).[70] In New York state, from 1980 to 1988, the proportion of adults convicted for drunk driving who were female rose from 7.2 percent to 11.6 percent; the number more than doubled from 3,124 to 7,050.[71] The drunk driving recidivism rate of women also rose, almost equaling that of men.

Chart 20

Suicide Attempts by Adolescents
Ages 12-19



Source: 1993 Youth Risk Behavior Survey

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Tobacco

Because smoking by women was not widespread until World War II, only recently has the full spectrum of illness and death wrought by tobacco emerged. In 1980, the U.S. Surgeon General pointed out, "The first signs of an epidemic of smoking-related disease among women are now appearing," and an "epidemic of chronic obstructive lung disease among women has also begun."[72] The leap of lung cancer beyond breast cancer as the leading cause of cancer death among women in 1986 was a grim milestone in this morbid trend.[73]

Today, half the women who smoke (47.4 percent) will die from tobacco-related causes; in the early 1960s, only one out of six (16.7 percent) were expected to die from such causes.[74] Now at least 140,000 women die each year from illnesses attributable to smoking cigarettes: 62,000 from heart disease, 36,000 from lung cancer, 25,000 from chronic lung disease, 10,000 from pancreatic, oral, esophageal, laryngeal, urinary and cervical cancers, and 8,000 from lower respiratory infections.[75] Since 1983, heart disease has killed more women than men each year (478,179 vs. 447,900 in 1991); smoking accounts for 13 percent of these deaths due to heart disease, the leading killer of women.[76]

Women who live with a smoking spouse have a 30 percent higher risk of lung cancer than women who are not chronically exposed to passive smoke.[1]

[1] **Fontham, E. T. H. et al. (1994). Environmental tobacco smoke and lung cancer in nonsmoking women: A multicenter study. JAMA, 271(22), 1752-1759.**

Mortality from tobacco-related illnesses is higher among black women than white women.[77] No one is sure why, but explanations include: indications that black women

retain nicotine in their bodies longer than do white women;[78] preference among many black women for menthol cigarettes, which have a higher tar and nicotine content than other cigarettes and are easier to inhale deeply;[79] and higher rates of poverty.[80]

Women who smoke 20 or more cigarettes a day are up to four times likelier to get heart disease than non-smoking women.[81] Women who smoke 25 or more cigarettes a day are 5.4 times likelier to get fatal heart disease.[82] Women who smoke and use oral contraceptives increase their risk of a heart attack by 1,000 percent.[83]

Smoking can sabotage an elderly woman's ability to live independently. It raises a women's risk of osteoporosis, apparently by reducing her estrogen levels.[84] Women who smoke a pack a day throughout adulthood cut their bone density up to 10 percent by the time they reach menopause.[85] Because of osteoporosis, even minor falls can result in hip, forearm and vertebrae fractures.[86] Hip fractures, which strike some 200,000 women a year, push up a women's mortality by 20 percent during the first year after the accident; most of those

At age 16, Trudy Grover moved out of her parents house. "I loved the feeling of taking care of myself. I had my own apartment, worked as a waitress and always had a pack of Marlboros in my pocket. One day when I was 35, I was running back and forth between tables and suddenly couldn't catch my breath. It was like somebody was holding me underwater. I told myself I was just getting older. At age 42, I was diagnosed with emphysema. The doctor put me on an oxygen tank, an ugly thing with green rubber tubes running into my nose. In the struggle to breathe, you can lose control of your bladder. I cried in shame. In 1993, I had a lung transplant--my only option, said the doctor. Now, a year and a half later, I take 23 pills a day. To pay bills, I was forced to sell my home and possessions. And I made the saddest journey of my life: back to my mother's house. 'Mom,' I said, averting my eyes, 'I'm broke. Will you take me in?' I was begging my 73-year-old mother to take care of me again. I couldn't help crying."[1]

[1] Ecenbarger, W. So you think you want to smoke: The stories of four who did. Reader's Digest, 9/94, pp. 61-7.

who survive are permanently disabled.[87] Smoking has also been linked to weak muscles, poor balance and impaired neuromuscular function among women over age 65; one study found the decrease in muscle function comparable to five years of aging.[88]

Smoking may also cause infertility and early menopause.[89] Women who smoke are 1.3 to 3.4 times likelier to suffer infertility, and women ages 44 to 54 who smoke have early menopause at about twice the rate of those who never smoked.[90] Early menopause, in turn, has been linked to a higher risk of osteoporosis-related fractures, heart disease and cancers of the reproductive system.[91] A woman who smokes raises her risk of cervical cancer at least 50 percent and can double her risk of having ovarian cysts.[92] Smoking may also increase the severity and effects of hypothyroidism, a hormonal disorder.[93]

Although most smokers want to quit, only 2.5 percent succeed each year.[94] Of women who smoke daily, 42 percent tried to quit at least once in the previous year--and failed.[95] It is little surprise that fear of weight gain is a significant reason for failure since so many American women chronically worry about their weight. On any given day, four out of 10 women in the U.S. are trying to lose weight.[96] A third of female smokers are overweight.[97]

Susan started smoking at age 22. It seemed the thing to do. Now 42 and a college journalism professor, she can't kick the habit, despite a chronic asthma condition that requires daily medication--and once landed her in the hospital. "I maintain this fantasy," she said in the gravelly voice of a 20-year smoker, "that if I really wanted to quit, I could. I actually have a conversation with myself in which I say, 'Okay, I have to stop smoking and lose weight, so which should I do first? Quit eating or quit smoking? Clearly, I'd be better off if I didn't smoke, but I'm afraid I won't be able to lose weight then."[1]

[1] Morain, C. Still a long way to go, baby... American Medical News, 7/4/94.

Female smokers who think the health risks of gaining weight cancel out the benefits of quitting smoking are misguided.[98] Over a 10-year period, women who quit smoking gain an average of 11 pounds more than women who continue to smoke.[99] But, as one expert insists, "You would have to gain more than 100 pounds to equal the health risks of smoking two packs a day."[100]

Many female smokers clearly care more about appearance than health.[101] Yet, by reducing blood flow to the skin, smoking also increases facial wrinkling, particularly crow's feet around the eyes.[102] In time, "smoker's face"--lines or wrinkles, gaunt facial features, grayish skin and a plethoric complexion--can be found among 46 percent of smokers.[103]

Quitting produces results. Women who stop smoking cut their risk of stroke in half.[104] Within a year, their smoking-related risk of heart disease drops 50 percent.[105] After three years, the risk of a heart attack is no greater than for women who never smoked.[106] Within five years, their smoking-related risk of heart disease can disappear altogether.[107] The higher risk of cervical cancer also declines in former smokers.[108]

Illicit Drugs

In both women and men, cocaine use can cause heart attacks, hypertension, strokes, pulmonary disorders, seizures, tremors, motor and visual problems, malnutrition and infections from intravenous injection sites.[109] AIDS, syphilis, tuberculosis, hepatitis B, pneumonia and suppressed immune function are also common ills among cocaine and other illicit drug users.[110] Some consequences of illicit drug use, however, strike women with particular force.

Because women may develop dependence on drugs more quickly than men, they may experience the ill-health effects of drug use faster.[111] Female drug addicts are also at higher risk of contracting the AIDS virus than men, not only because of the easier transmission of the virus from a man to a woman, but because they are more likely to have a drug-using partner with whom they have unprotected sex or share dirty needles and to have unprotected sex with multiple partners in order to finance their addiction.[112]

Seventy percent of all AIDS cases among women stem from illicit drug use.[113] Almost half are the result of injection-drug use; another quarter come from having sex with an injection-drug user.[114] The 80,000 women with HIV in 1992 will leave behind some 150,000 children when they die.[115] Of these children, some 38,000 will themselves have AIDS.[116]

Initially a disease that raged primarily among homosexual men, AIDS is now spreading most rapidly among drug users and their partners, and particularly women of color.[117] Almost one out of five new AIDS cases (18 percent) in 1995 were women, compared to one out of 14 (7 percent) in 1985.[118] In 1994, more than three-fourths (77 percent) of new AIDS cases among women were blacks (8,000) and Hispanics (2,800).[119] AIDS is now the leading cause of death for black women ages 25 to 44 (22 percent of deaths) and the fifth leading cause of death for white women in this age group (6 percent of deaths).[120]

Even if the female drug user escapes HIV infection, she is at high risk of catching other sexually transmitted diseases such as syphilis, genital herpes, gonorrhea, human papillomavirus and chancroid.[121] The incidence of these diseases among women has risen

in tandem with the crack epidemic.[122] In Connecticut, a 422 percent jump in syphilis cases among women from 1986 to 1988 was linked to cocaine use and prostitution.[123] Tuberculosis (TB) has also surged among drug users. From 1985 to 1992, the number of TB cases among women ages 15 to 44 rose 41 percent in the U.S.[124]

Adolescents who use cocaine are 31 times more likely be sexually active, 27 times more likely to have four or more partners and twice as likely to fail to use a condom than teens who do not use alcohol, tobacco or illicit drugs.[1]

[1] Lowry, R. et al. (1994). Substance use and HIV-related sexual behaviors among U.S. high school students: Are they related? American Journal of Public Health, 84(7), 1116-1120.

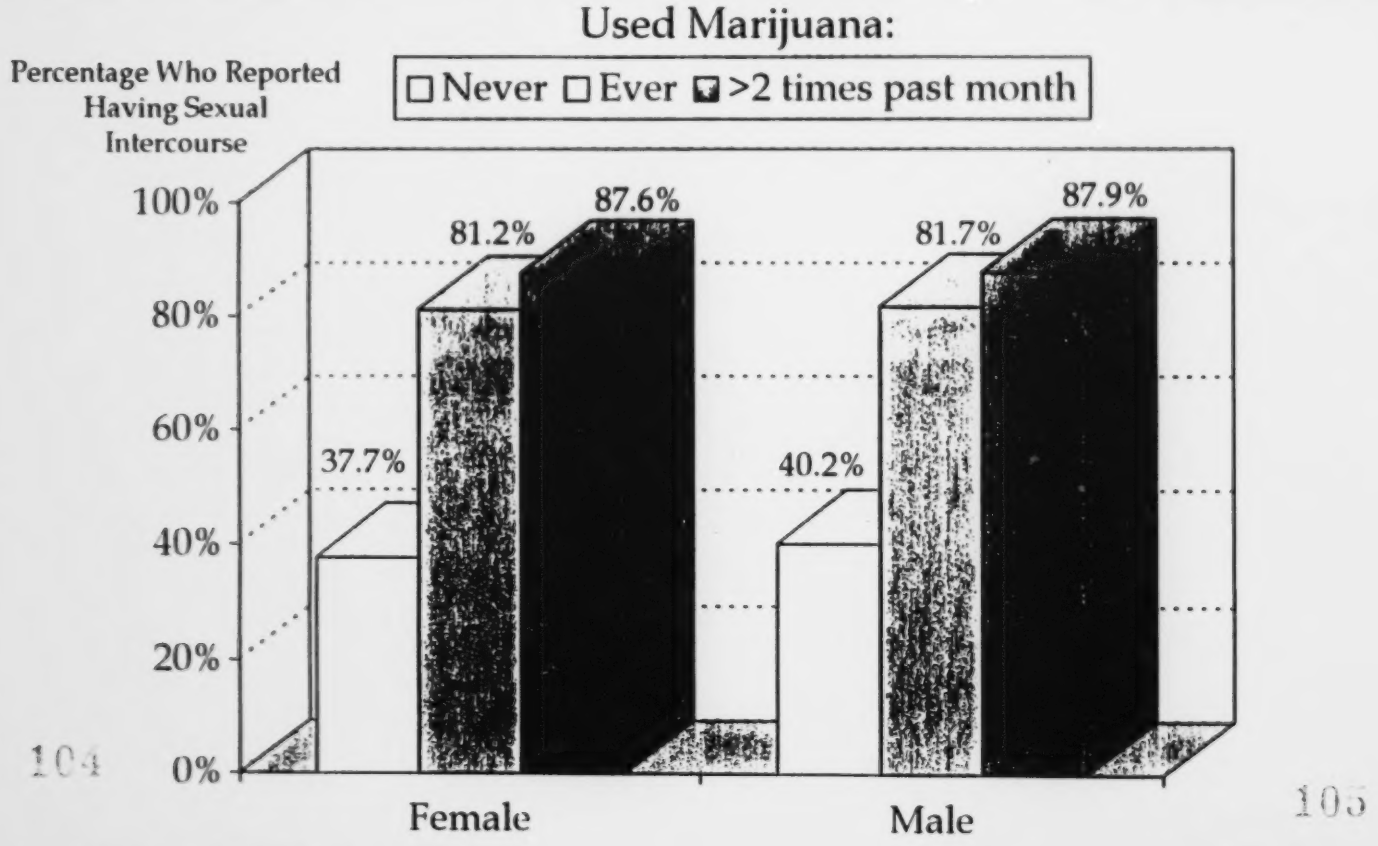
Many non-drug using women put themselves at risk by having unprotected sex with men who may be drug-users. Among sexually active unmarried women, less than one in six always has her partner use a condom to avoid sexually transmitted diseases.[125] Women may be reluctant to suggest a man wear a condom for fear of signaling distrust or "ruining the romance."[126] Hispanic women may be particularly unwilling to ask for a condom for fear of suggesting they are savvy about the risks of sex, which a man might consider inappropriate.[127] African American women may not want to challenge men who might feel powerless in every domain of their life except their sexuality.[128] Some women fear violent reprisals.[129]

Like alcohol, marijuana heightens the likelihood of unprotected sex.[130] Teenage girls who used marijuana at least three times in the past month are more than twice as likely to be sexually active and 25 percent less likely to use condoms than those who never use marijuana (S) (CHARTS 21 and 22).

Chart 21

Sexual Activity Among Adolescents

Ages 12-19



Source: 1993 Youth Risk Behavior Survey

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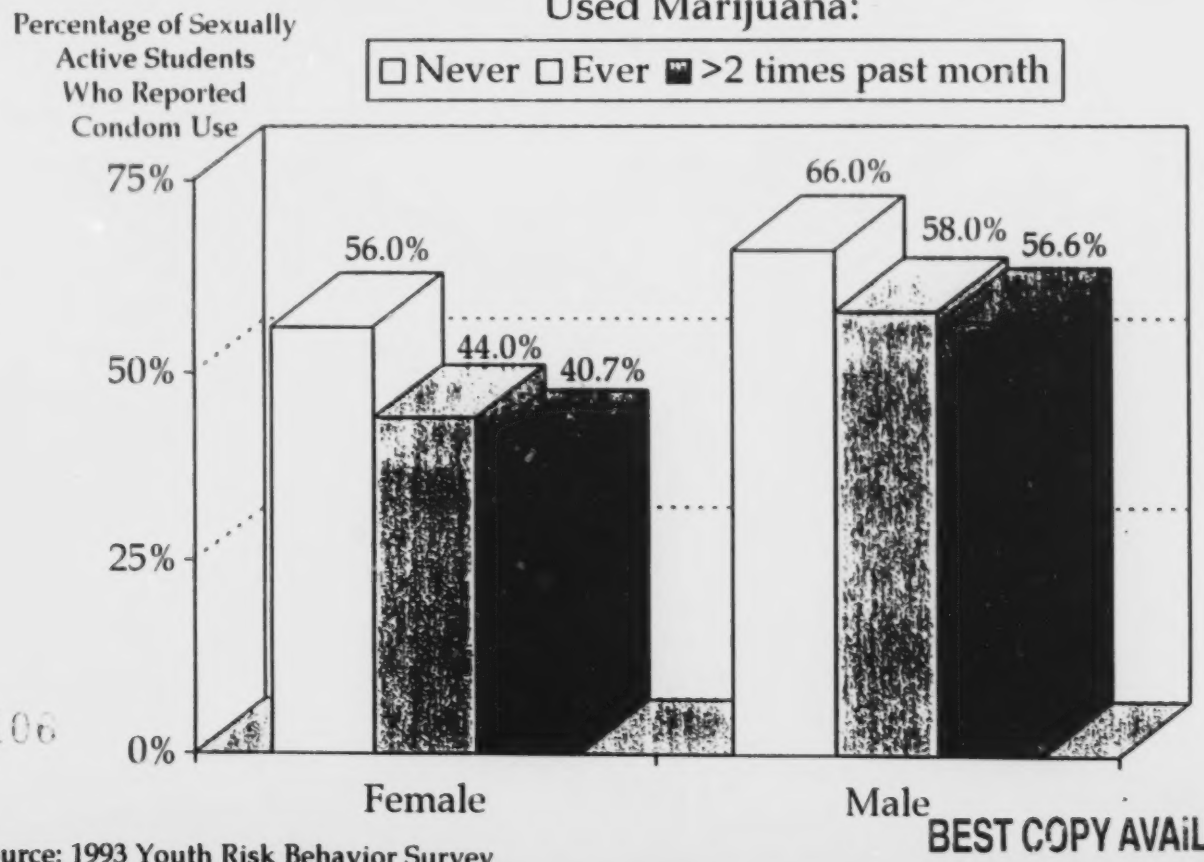
Chart 22

Condom Use Among Adolescents
Ages 12-19



Source: 1993 Youth Risk Behavior Survey

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Illicit drugs may interfere with a woman's reproductive system, though most studies are limited by a failure to account for concurrent alcohol use. Heroin, marijuana and cocaine have each been linked to amenorrhea, anovulation and spontaneous abortion.[131] Cocaine and heroin can depress sexual functioning as well: women are 66 percent more likely than men to say that cocaine negatively affected sexual experience (48 percent vs. 29 percent).[132]

Weight

Because cocaine, heroin and methamphetamines can suppress appetite, some women may use them (or continue to use them) to lose weight.[133] One study found that in contrast to male cocaine-users, female users often reported skipping four or more regular meals in a row.[134] Malnourishment is a particular concern during adolescence, an important period of development, and pregnancy, when a woman's nutritional needs rise dramatically to assure healthy fetal growth.[135]

According to staff at the Farm Place rehabilitation center in Surrey, England, many fashion models are addicted to drugs. While caffeine, nicotine and laxatives are among the substances frequently abused, they are not the most dangerous. To keep their weight down, models often take amphetamines or other stimulants--such as cocaine--that increase their heart rate and decrease their appetite. Heroin also has become more popular as a means of weight control, because it can be snorted rather than injected.[1]

[1] Hardy, R. Drugs, dieting and my fear of falling in love. Daily Mail, 4/18/95, p. 18; Gandel, D. Fashion inside out: It's an ad of a different color, perspective. Los Angeles Times, 7/7/94, p. E4; Blundy, A. Real lives: When looks can kill. The Independent, 8/20/95, p. 3.

Prostitution and Crime

While the link between drugs and prostitution is hardly new, trading sex for money to buy drugs became a common and deadly practice among crack-addicted women.[136] Among 84 crack-using women who were not in treatment, three out of four (73 percent) had been arrested for prostitution.[137] In New York City, as the price of cocaine dropped with the arrival of crack "rocks" at $2 each, in some areas the charge for sex acts also fell from $25 to $2.[138]

Crack houses have become not only the hovels of addicts, but centers of the sex trade, where women desperate for drugs sell their bodies to finance their addiction. Despite the physical abuse, violence, unintended pregnancies, AIDS and other sexually transmitted diseases that come with it, female addicts become dependent not only on the drug, but also on the crack house for what, in the web of addiction, appears to them to be their only way to survive.[139] One researcher concluded, "The sex-for-crack phenomenon and the incredible degradation of women surrounding much of its routine enactment is like nothing ever seen in the annals of drug use, street life, prostitution or domestic wife-battering."[140]

The declining price for sex acts and the violent environment of crack addiction has pushed some women into robbery,

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For the Chambers brothers, millionaire entrepreneurs of crack, "unparalleled customer service" was their watchword. At one of their first all-night crack palaces, the smallest rocks were sold on the first floor, slightly larger rocks on the second, escalating to "$20 boulders" on the fourth. Private rooms were available for smoking and drinking, and one apartment was furnished with a bed frame, box springs and mattress for "female customers who craved crack but had no money."[1]

[1] Olsen, J. Brains and Industry. New York Times Book Review, 4/23/95, p. 6.

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burglary and drug dealing.[141] Although women are still less likely than men to commit violent crimes, female addicts commonly shoplift, pickpocket, sell stolen goods and forge checks.[142]

The crack epidemic has fueled an explosion in the female prison population since 1980.[143] From 1984 to 1993, the number of women arrested for drug offenses jumped 82 percent, compared to 52 percent for men.[144] By 1991, a third of female state inmates (32.8 percent) were serving time for a drug offense, compared to one in eight (12 percent) just five years earlier.[145] While men outnumber women in state and federal prisons by a ratio of 16 to 1 (952,585 men vs. 59,878 women in 1994), the number of female inmates is growing faster than the number of male inmates.[146]

Women who commit crimes are more likely than men to have used drugs regularly, to have used them daily in the month before the crime, to have committed the offense to raise money to buy drugs and to have been under the influence of drugs at the time of the crime.[147] Of those women under the influence, 10.1 percent were using crack; 10.8 percent, heroin.*

In 1988, of 2,280 inmates that the New York City Department of Corrections identified as addicted to crack, 56 percent were women.[148] In 1989, among women imprisoned for drug offenses in New York State, 78.6 percent cited crack (44.7 percent) or cocaine (33.9 percent) as the drug leading to their crime and conviction.[149] Nationwide, more than half the women arrested in 1994 tested positive for drugs; in some cities, including Cleveland, New York and St. Louis, more than three-quarters tested positive.[150]

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* These numbers cannot be added because some women were under the influence of more than one drug.

Two-thirds of female inmates are mothers of at least one child; between 6 and 15 percent are pregnant when they enter prison.[151] A 1989 survey of jail inmates found that 64 percent of those who were mothers had used cocaine in the month before arrest; 45 percent of those who were fathers had done so.[152] Fifty-eight percent of the mothers and 39 percent of the fathers reported recent heroin use.[153]

Violence

While most research has focused on the link between violence and alcohol use, violence is also the deadly companion of illicit drug use--and it strikes women with magnum force. Most female drug addicts have been violently assaulted.[154] Nine out of 10 women (87 percent) in a New York City drug treatment program were found to be victims of violence.[155] Seventy percent of drug-addicted, low-income pregnant women in methadone maintenance have been beaten--86 percent of them by their husbands or partners.[156] Many partners are also drug-users, which raises the woman's risk of getting beaten.[157]

Women who use cocaine are at high risk of being murdered.[158] In New York City from 1990 to 1991, black female homicide victims, ages 15 to 24, were twice as likely as black male victims of the same age to test positive for cocaine (35.6 percent vs. 18.9 percent).[159] In the 25 to 34 age group, 71.8 percent of black women (vs. 44.4 percent of black men) and 59.1 percent of white women (vs. 37.5 percent of white men) tested positive for cocaine.[160]

Homicide, suicide, overdoses or other injuries that prove fatal often follow cocaine use for both women and men.[161] In New York City from 1990 to 1992, fatal injuries after

cocaine use exceeded the number of deaths from AIDS, cancer or heart disease among black and Hispanic women ages 15 to 24.

Prescription Drugs

Alcohol and most prescription drugs don't mix. Any prescribed drug carries the risk of an adverse reaction if the woman is using other drugs or alcohol at the same time.[162] Stupor or confusion from sedatives, lowered blood pressure from anti-psychotics, fainting following the use of antidepressants, sedatives or tranquilizers--all are the unintended and perilous results of a prescription drug used in combination with other drugs and/or alcohol.[163] Tranquilizers, such as Valium or Xanax, are particularly dangerous in combination with alcohol because both depress the central nervous system, leading to falls, hip fractures and car accidents that are potentially fatal.[164]

In the 1970s, the replacement of barbiturates with the sedative drugs known as benzodiazepines (Valium, Librium, Xanax, Tranxene, Ativan, Halcion and others) greatly reduced the risk of accidental overdoses and mental impairment that can lead to debilitating and even deadly falls.[165] But benzodiazepines still carry a risk of unwanted drowsiness, confusion and ataxia, which can incapacitate the elderly and lead to falls and broken bones.[166]

The consequences of prescription drug misuse affect elderly women more severely than men because these women use more psychoactive prescription drugs and doctors are less likely to recognize an alcohol problem in an elderly woman than in a man.[167] Use of sedating and antidepressant prescription drugs almost doubles the risk of falls and fractures

among the elderly.[168] In a prospective study of 336 people age 75 or older, 32 percent fell within a year, 24 percent with serious injuries and 6 percent with fractures.[169] Sedative use--more so even than dementia--was the most important factor in predicting who would fall.[170] Use of antidepressants increases the risk of hip fracture by 1.6 in adults ages 65 and older, after accounting for factors such as dementia and general functional status.[171]

Health and Welfare Costs

Women's substance abuse triggers substantial health care and welfare costs. In 1995, women's use of alcohol, tobacco and illicit drugs accounted for $68 billion in health care costs, 12.3 percent of all health care spending for women.[172] Men's substance use and abuse was responsible for $72 billion in costs, 19.2 percent of all spending for men. Among women, 52 percent of the costs were due to cigarette smoking, 30 percent to alcohol and 18 percent to illicit drugs. For men, 58 percent of the costs were for cigarettes, 26 percent for alcohol and 16 percent for illicit drugs.

In addition, one million women--at least 20 percent of those receiving welfare benefits from the Aid to Families with Dependent Children program--are frequent binge drinkers or regular drug users.*[173] These numbers may be low. A Maryland study found substance abuse a serious problem for 37 to 52 percent of the women in a welfare-to-work program; the prevalence of alcoholism and drug abuse ranged from 16 to 21 percent, while an

* In this analysis, frequent binge drinkers have 5 or more drinks at a sitting at least weekly; frequent drug users use hallucinogens at least monthly, cocaine or heroin at least weekly, or marijuana more than 2 days a week.

additional 21 to 31 percent of these women experienced problems related to substance use.[174] Without treatment and other help, these women are likely to be trapped on welfare.

IV.

Drugs, Alcohol and Cigarettes During Pregnancy: A Lethal Combination for Mother and Child

Smoking, drinking alcohol and using drugs during pregnancy can have devastating consequences for the fetus and newborn child. Cigarette smoking accounts for up to 20 percent of all low birth weight in America, making tobacco the leading preventable cause of this frequent precursor to infant mortality.*[1] Alcohol use is responsible for 10 percent of all mental retardation, making it the leading preventable cause of this birth defect.[2] Cocaine and heroin use during pregnancy may severely impair the newborn.

Nicotine and alcohol are the drugs most widely used during pregnancy. Of the 4 million women who get pregnant each year, some 820,000 (20.4 percent) smoke cigarettes and 757,000 (18.8 percent) drink alcohol during pregnancy.[3] Roughly 500,000 (13 percent) use illicit drugs.**[4] Of them, more than five of 10 smoke marijuana; six of 10 use an illicit drug other than marijuana; one-fifth snort or smoke cocaine; and one of four misuse prescription drugs, such as Librium and Valium (CHARTS 23 and 24).***[5]

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* Low birth weight babies weigh 5.5 pounds (2,500 grams) or less at birth. Such small babies are 40 times more likely to die in the first month of life and have a higher risk of retardation, blindness and learning problems. Disorders relating to prematurity and low birth weight were the third leading cause of infant death in 1991.

** National estimates range from 212,000 to 736,000 prenatally exposed newborns each year. See pg. 68.

*** These numbers cannot be added because most women use more than one substance.

Drug use during pregnancy prompted public concern when the crack cocaine epidemic swept cities nationwide in the 1980s.[6] From 1979 to 1990, the percentage of pregnant women who used drugs, as reported on hospital discharge records, soared 576 percent.*[7] Thousands of newborns arrived in hospitals affected by crack cocaine and other drugs. Hundreds became "boarder" babies who stayed in the hospital for months, often for no medical reason, because their drug-using mothers and fathers were unable or unwilling to care for them or because child welfare investigations delayed discharge of the child.

Cities and states across the country are struggling to respond to this influx of drug-exposed babies. In New York City from 1980 to 1988, the recorded number of newborns whose mothers had used illicit drugs while pregnant jumped from one in 137 to one in 33, which in 1996 puts about one drug-exposed baby in every average lower-school classroom of 30 students.[8] In California, drug-exposed births at three hospitals doubled from 1986 to 1989.[9] Both the Los Angeles and Chicago school districts have developed a special preschool curriculum for babies exposed to drugs in the womb.[10]

Foster Care

The crack epidemic, as well as alcohol and other drug use, has sparked a surge in child abuse and neglect that has overwhelmed child welfare agencies.[11] From 1985 to 1994, reports of abuse and neglect nationwide rose 64 percent from 1.92 million to 3.14 million.[12] Drug and alcohol abuse is a significant factor in more than 75 percent of child

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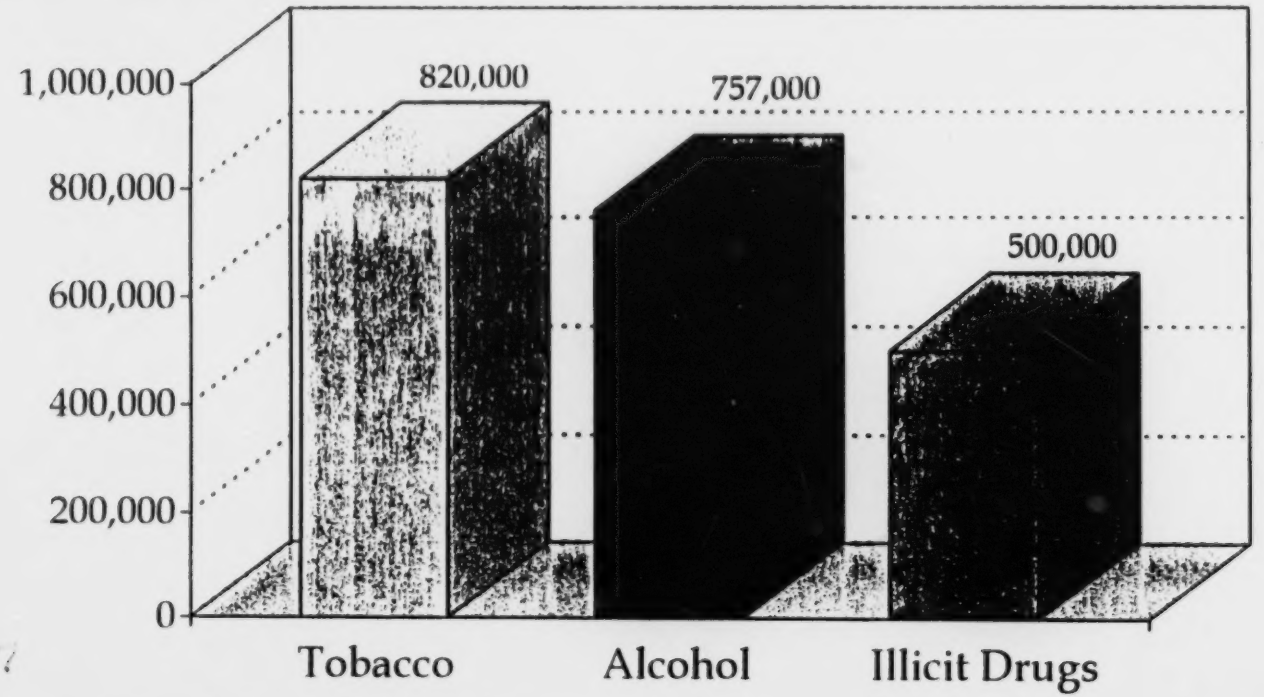
* Based on the National Hospital Discharge Survey, the rate of drug use among pregnant women rose from 10.1 per 10,000 (0.1%) in 1979 to 68.3 per 10,000 (0.7%) in 1990. While the magnitude of the rise provides evidence of an epidemic, the rates of drug use appear low. Hospital discharge records are widely believed to under-report drug use substantially.

Chart 23

Drug Use During Pregnancy

Of the 4 million women who give birth each year:



NOTE: These numbers cannot be added because most women use more than one substance.

Source: NIDA, 1994; Vega, 1993; Center for the Future of Children, 1991; South Carolina State Council on Maternal, Infant & Child Health, 1991

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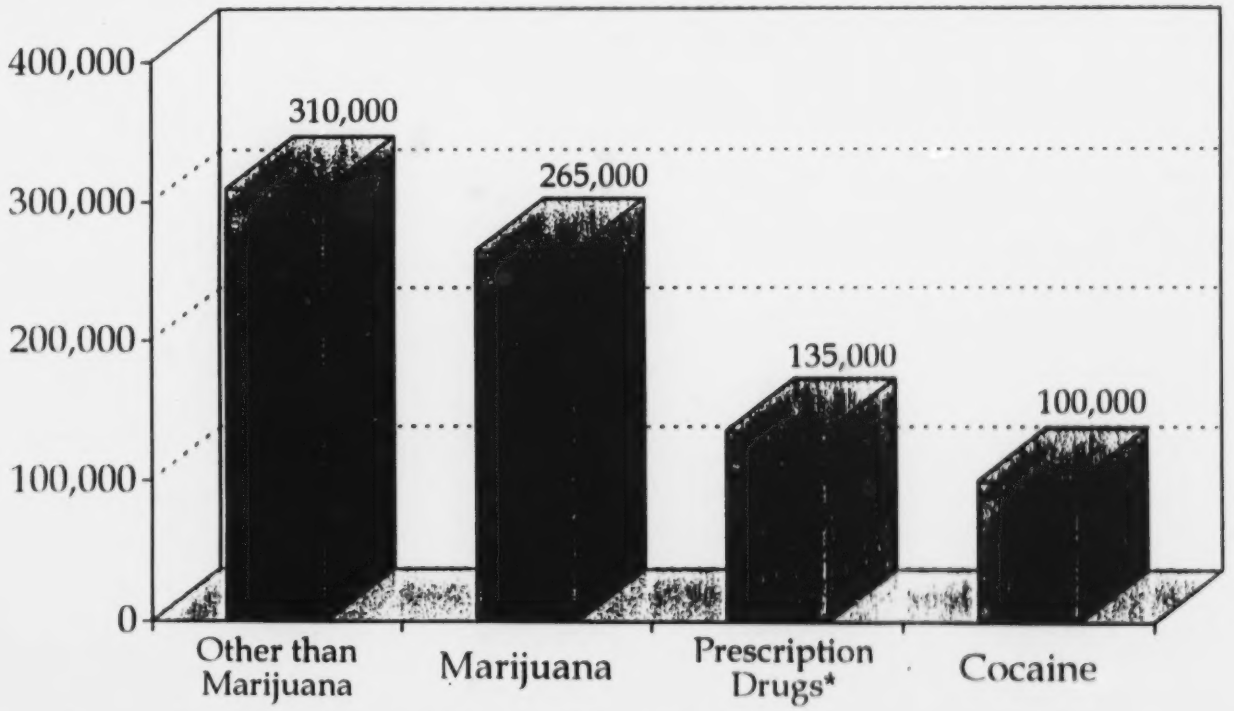
Chart 24

Illicit Drug Use During Pregnancy

Of the 4 million women who give birth each year, roughly 500,000 use illicit drugs:



119

NOTE: These numbers cannot be added because most women use more than one substance.

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* Non-medical use of psychotherapeutics (amphetamines, sedatives, tranquilizers or analgesics).

Source: NIDA, 1994; Vega, 1993; Center for the Future of Children, 1991; South Carolina State Council on Maternal, Infant & Child Health, 1991

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welfare cases in some cities, such as New York.[13] With so many of these parents unable to raise their children, the number of children in foster care nationally jumped 53 percent from 280,000 in 1986 to 429,000 in 1991.[14] Over the same period, the percentage of children in foster care age three or younger, who have been exposed prenatally to drugs, doubled from 29 to 62; the percentage of those with documented prenatal cocaine exposure more than tripled from 17 to 55.[15] Critical shortages of foster care families have forced child welfare authorities to shuffle children among homes, separate siblings and place thousands of children in group homes--with little or no hope of being adopted.[16]

Juggling individual caseloads that have ballooned up to 160, case workers who investigate reports of abuse and neglect must make delicate judgment calls, often with little or no training in substance abuse and scarce resources or treatment slots at their disposal.[17] Yet without swift action, reports of abuse can become certificates of death. In New York City, the deaths of 74 children in 1994 had been reported for suspected abuse or neglect. In 17 of the 25 cases (68 percent) investigated by the Child Fatality Review Panel, the mother had a history of substance abuse, and in 15 of these she was using drugs at the time the child died.[18] Seven of the children who died had tested positive for drugs at birth.[19]

In a 1989 survey of 12 metropolitan areas nationwide, child welfare officials said that standards for foster parents have declined to meet demand created by the crack epidemic. A caseworker on the West Coast said that applicants with "marginal" qualifications who would have been turned away a few years ago are now accepted. Nevertheless, another caseworker said that there are not enough people willing to adopt "these kind of children."[1]

[1] Knaserow, R. P. (June 1990). Crack babies. Washington, DC: U.S. Department of Health and Human Services, Office of the Inspector General.

AIDS

AIDS is another deadly consequence of substance abuse for both mother and child. A quarter of infants born to women with HIV are themselves infected with the virus.[20] From 1985 to 1995, some 16,000 babies were born infected with HIV.[21] These children contracted the virus from their mothers, most of whom were infected by sharing dirty needles to inject drugs or having sex with an HIV-positive injection drug user.[22] Some mothers contracted the virus by trading sex for drugs--usually crack cocaine.[23]

Though AIDS is the most serious threat to newborns, syphilis is another common scourge passed from pregnant drug users to their children.[24] As crack cocaine use surged during the 1980s, so did the number of newborns with syphilis. In 1991, 4,410 babies were born with syphilis, compared to 107 in 1980.[25] Women who have syphilis can be tested during pregnancy and treated to prevent transmission to the newborn, but many drug-addicted women get no prenatal care or get it too late.[26]

On November 11, 1992, a baby girl was born at Kings County Hospital in Brooklyn with the matchstick arms and legs and underdeveloped lungs typical of babies born 11 weeks early. But this newborn also had an enlarged liver and spleen and peeling skin on the palms of her hands and soles of her feet, signs that she had contracted syphilis in her mother's womb. Most pregnant women who have syphilis are screened at their first prenatal visit, get early treatment and have no problem. But most of the babies with syphilis are born to mothers who get no prenatal care. Many of them are addicted to crack and contracted syphilis trading sex for drugs.[1]

[1] Lewin, Tamar. Syphilis cases among newborns climb with the rise in crack use. New York Times, 11/23/92, p. A13.

Illicit Drug Use

No single survey has definitively determined how many women use illicit drugs during pregnancy. Studies vary in

their method for determining use (self-report, urine tests, tests of meconium (baby's first stool)), the demographics of the sample (race, income, residence (urban, suburban, rural)) and the hospital protocol for deciding whom to test. Some hospitals screen for substance use only when a woman who is giving birth appears to be high on drugs or if her newborn has problems that often stem from prenatal drug exposure. If hospital staff decide to ask about drug use, a woman can provide information on the quantity, frequency and timing of use throughout her pregnancy, but she may forget, withhold information or lie.[27] Urine tests are more reliable, but can detect cocaine for only up to 48 hours after use. Less commonly employed, meconium screening can detect cocaine and other drug use from a few weeks to several months after use.[28] Rarely employed, new technology to analyze hair can determine quantity and timing of some drug use throughout pregnancy.[29]

This menu of methods produces varying estimates of the number of pregnancies that involve illicit drug use--from 5.3 percent to 23.9 percent (CHART 25). Vega *et al*'s study used urine tests from 29,494 women in California; applying the results nationally indicates a rate of illicit drug use during pregnancy of 5.3 percent (212,000 infants in 1995).*[30] The National Health and Pregnancy Survey of the National Institute on Drug Abuse (NIDA), which asked women in face-to-face interviews about their drug use, found a rate of 5.5 percent (220,000 babies).[31] But NIDA's 1994 National Household Survey on Drug Abuse, which also used face-to-face interviews, found that 9.4 percent of pregnant women had used an illicit drug during the past year (376,000).[32] Chasnoff's 1989 survey of 36 urban

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* CASA estimated the number of illicit drug-exposed infants by applying the percentages to the total number of live births in the U.S. in 1995 (approximately 4 million).

hospitals found a rate of 11.0 percent (440,000).[33] In those hospitals that tested for substance use only when they saw severe birth complications, average prevalence was 3.0 percent; but where they tested *every* woman, average prevalence was 15.7 percent.

Assuming that pregnant women use illicit drugs at the same rate as other women, Gomby and Shiono concluded that roughly 18.4 percent of pregnant women use illicit drugs (736,000 babies).*[34] While this may overestimate use because some women abstain while pregnant, estimates that rely on more conservative measures, such as urine tests and self-reports, may be just the tip of the iceberg.[35] A state-wide study in South Carolina found that meconium and urine tests picked up twice as many drug users as urine tests alone (23.9 percent vs. 10.2 percent). Until meconium and other more reliable tests are widely employed, substance use by pregnant women could be the most missed diagnosis in obstetric and pediatric medicine.[36]

Who Uses During Pregnancy?

Illicit drug, alcohol and tobacco use during pregnancy crosses racial, economic and educational lines, but the drug of choice varies depending on the woman's situation.

African American women are more than twice as likely as white women to use illicit drugs while pregnant (11.3 percent vs. 4.5 percent).[37] Prenatal cocaine use is far more common among black women than white women (4.5 percent vs. 0.4 percent). White women are more likely to drink alcohol (22.7 percent vs. 15.8 percent) and smoke cigarettes

* Gomby and Shiono estimate the rate of illegal drug use among pregnant women to fall between 15.8 and 21 percent; 18.4 percent is the mid-point.

Chart 25

Illicit Drug Use During Pregnancy

%	(Source)	1995*
5.3	(Vega, *et al*, 1992)	212,000
5.5	(NIDA, 1992-93)	220,000
9.4	(NHSDA, 1994)	376,000
11.0	(Chasnoff, 1989)	440,000
18.4	(Gomby & Shiono, 1990)	736,000
23.9	(South Carolina, 1990-91)	956,000

* CASA estimated the number of illicit drug-exposed infants by applying the percentages to the total number of live births in the U.S. in 1995 (approximately 4 million).

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(24.4 percent vs. 19.8 percent) than black women during pregnancy. Some surveys have found white women more likely to use marijuana prenatally.[38]

Unmarried pregnant women are nearly four times likelier to use illicit drugs than married pregnant women.[39] Cigarette and illicit drug use is more common among women with low levels of education.[40] Women with less than a high school degree are more than twice as likely to smoke cigarettes and more than three times as likely to use marijuana while pregnant as women who have been to college.[41]

Drinking rates during pregnancy tend to rise with age, education and income. Women age 20 and over are twice as likely to drink during pregnancy as those under age 20.[42] Despite the Surgeon General's urging in 1981 that women abstain during pregnancy, women with 16 or more years of education and those with income of $40,000 or more are likelier to drink during pregnancy.[43] However, women with incomes of $10,000 or less are more likely to drink *frequently* while pregnant.*[44]

Survey results that have compared illicit drug use among publicly and privately insured women are inconsistent. Two statewide studies, as well as a random sample in Hillsborough County, Florida, found higher rates of illicit drug use among pregnant women who rely on public insurance or are uninsured.[45] But a study of all pregnant women receiving prenatal care in public health clinics or in selected private clinics in Florida's Pinellas County found illicit drug use among 16.3 percent of patients at public clinics and 13.1 percent of those at private doctors' offices.[46]

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* In this 1995 Centers for Disease Control and Prevention study, frequent drinkers had six or more drinks per week during pregnancy.

Damage Done to Children

Ideally, research on birth outcomes (such as rates of low birth weight, prematurity and birth defects) and child development would compare women who use a drug with non-drug using women who are otherwise similar in age, race, income, education and use of prenatal care. In practice, multiple drug use and factors such as poverty and inadequate prenatal care confound most assessments of the impact of using a particular drug.[47] Many, if not most, pregnant women who take drugs during pregnancy use more than one kind of drug, usually including alcohol or tobacco.[48] Tabloid and sound-bite journalism that spotlights "crack babies" is misleading because most such newborns have been exposed to at least one other illicit drug, as well as nicotine and alcohol.

Untangling the relative impact of each drug on a baby born to a woman who smoked cigarettes, drank alcohol and snorted cocaine while pregnant is extremely difficult. If she also lacked prenatal care and a nutritious diet, or was abused by her partner, the task of teasing out the impact of each of these factors is even more complex. If possible, research samples need to be large enough to separate and compare the effects of individual drugs, as well as drugs used in combination, and to control for demographic factors such as income, education, access to prenatal care and nutrition.

Due to formidable cost and practical obstacles, no study has met all these standards. Yet in recent years, researchers have begun to address urgent questions--although they sometimes come up with conflicting answers--about the damage to the fetus and babies exposed to tobacco, alcohol, and illicit and prescription drugs in the womb. The complexity of this issue requires much more research, but here is what we know.

Fetal Tobacco Syndrome

Each year, smoking during pregnancy causes up to 141,000 miscarriages, 61,000 low birth weight babies, 4,800 perinatal deaths (including stillborn infants and infants who die shortly after birth) and 2,200 infant deaths from Sudden Infant Death Syndrome (SIDS),* and may cause respiratory illness and delay a child's cognitive development.[49]

An analysis of the 1991 National Center for Health Statistics Linked Birth/Infant Death Data Set reveals that smoking during pregnancy increases the risk that a child will die within the first year of life (CHART 26).**[50] While the infant mortality rate among women who do not smoke during pregnancy is 8.0 per 1,000, it jumps to 12.2 per 1,000 among those who

A group of pregnant teenagers said controlling their weight gain was a chief reason they smoke:[1]

- *"I smoked one pack a day before I got pregnant. I smoke more now since I'm pregnant. If I put on too much weight now, it would be hard to lose after delivery. I smoke now 'cause I have trouble with diets."*
- *"I know with smoking I will not have to diet postpartum. I smoke two packs a day now. Before I got pregnant I needed to lose 100 pounds. I can't think of having to lose more weight by dieting."*
- *"My friends poke fun at me and call me names 'cause I'm too fat with this pregnancy. I smoke to keep my weight down."*
- *"I won't get another boyfriend if I gain too much weight. I smoke so I'll be slim and boys will ask me out."*

[1] Lawson, E. J. (1994). The role of smoking in the lives of low-income pregnant adolescents: A field study. Adolescence, 29(113), 61-79.

* Lowinson, et al, (1992) define SIDS as the sudden and expected death of an infant between 1 week and 1 year of age, whose death remains unexplained after a complete autopsy examination, full history and death site investigation.

** Data do not account for use of alcohol and illicit drugs.

smoke (S). The risk of infant death is almost as high among lighter smokers (less than a pack a day) as among heavier smokers.

The damage tobacco inflicts on the fetus and newborn is so severe and widespread that experts talk of a "fetal tobacco syndrome" (FTS), and conclude, "The time has come to recognize cigarette smoking as the single most powerful determinant of poor fetal growth in the developed world."[51]

Smoking during pregnancy doubles the likelihood that a baby will be born underweight, after controlling for maternal alcohol and drug use, education and employment, and prenatal care.[52] Even passive exposure of pregnant women to cigarette smoke can double the risk.[53] Blood levels of cotinine (a metabolite of nicotine) are higher in black pregnant women who smoke than in white women who do so--even after accounting for the number of cigarettes smoked, years of smoking and other factors. This suggests that African-American women may metabolize the chemicals in cigarettes less effectively, leading to more severe health consequences for them and their children.[54] Coupled with higher rates of poverty and lower rates of prenatal care, such biological factors help explain why African American smokers have rates of infant mortality and low birth weight twice those of whites.[55]

The risk of SIDS is up to five times greater for infants born to women who smoke during the second trimester of pregnancy compared to those who don't smoke at all.[56] For children of parents who begin or resume smoking after birth, the risk of SIDS more than doubles compared to families without smokers. If the mother or father smokes in the same room as the infant, the risk of SIDS has been found to jump 4.6 to 8.5 times.[57] Passive

Chart 26

The Link Between Smoking During Pregnancy and Infant Death

	Infant Mortality Rate *(per 1,000)*
Non-Smoking Pregnant Women	8.0
All Smoking Pregnant Women	12.2
< 1 pack per day	12.0
≥ 1 pack per day	12.4

Source: Centers for Disease Control & Prevention, National Center for Health Statistics, Linked Birth/Infant Death Data Set, 1991

exposure to tobacco smoke during pregnancy raises the risk of low birth weight; exposure after birth increases the baby's chances of suffering respiratory illness, middle-ear infections and asthma.[58]

Smoking during pregnancy has also been linked to lower scores on intelligence tests.[59] Children prenatally exposed to half a pack or more of cigarettes per day have been found to have intelligence scores significantly lower at ages three and four than those with non-smoking mothers, even after adjusting for the mothers' education level.[60] But the cognitive consequences of tobacco exposure can dissipate over time. One study found a link between smoking during pregnancy and lower intelligence scores at one year, but not two, possibly due to intervening environmental factors, such as positive parent-child relationships.[61] Another study did not find lower intelligence scores at age five for children prenatally exposed to smoke.[62] (However, after adjusting for factors such as education, income, and prenatal alcohol use, children in this study whose parents smoked when their kids were in early childhood did have lower scores.)[63]

Children of mothers who smoked while pregnant and/or after giving birth appear to have more behavior problems, such as anxiety, trouble relating to other children, disobedience and difficulty concentrating.[64] Daughters of mothers who smoked during pregnancy, regardless of whether their mother smoked after giving birth, have been found four times likelier to smoke by age 13 than daughters of mothers who did not smoke during pregnancy.[65] One possible explanation is that smoking during pregnancy can affect the brain of the female fetus at a critical point in development and predispose her to nicotine addiction as a teen.[66]

Quitting or reducing smoking during pregnancy can improve birth weight and reduce the chances of premature birth.[67] A study of maternity clinics comparing pregnant smokers and women who either quit or cut back during pregnancy found that, after controlling for the mother's race, age and height and the child's gestational age at delivery, infants born to quitters were, on average, more than half a pound (241 g) heavier than infants born to smokers, and infants born to women who reduced their level of smoking averaged a fifth of a pound (92 g) more. Quitting altogether increases the length of pregnancy by one week, reducing the chance of complications and birth defects due to premature birth. [68] Even quitting during the third trimester can significantly improve a baby's birth weight because so much of fetal growth occurs at this time.[69]

Alcohol

Drinking during pregnancy produces a range of consequences, from fetal death and miscarriage to no apparent problems for some children.[70] Compared to non-drinkers, the risk of spontaneous abortion during the second trimester has been found to be twice as high for those who had one to two drinks a day and 3.5 times as high for those who had more than three drinks daily.[71] Drinking while pregnant increases the risk of death during the infant's first year by more than 50 percent. While the infant mortality rate among women who don't drink during

Drinking during pregnancy can more than double a child's risk of acute myeloid leukemia, a potentially fatal cancer.[1]

[1] Shu, X. et al. (1996). Parental alcohol consumption, cigarette smoking and risk of infant leukemia: A children's cancer group study. Journal of the National Cancer Institute, 88(1), 24-31.

pregnancy is 8.6 per 1,000, it rises to 13.3 per 1,000 among those who do (S) (CHART 27).*[72] The infant death rate is much higher--23.5 per 1,000--among pregnant women who drink an average of 2 or more per day (S).

If the child survives, the most severe outcome is Fetal Alcohol Syndrome (FAS), characterized by central nervous system dysfunction, including abnormally small head size and mental retardation, small length and weight, and facial malformations.[73]

The reported rate of FAS increased almost seven-fold from 1.0 per 10,000 live births in 1979 to 6.7 in 1993.[74] Hospitals recorded about 2,700 cases of newborns with FAS that year. Since overall drinking rates did not rise from 1979 to 1993, the increase in FAS is probably due to greater awareness of the syndrome and better diagnosis of it. Many experts believe FAS is still under-reported because so many of its symptoms are not obvious at birth.[75] The latest estimate for the U.S. is a rate of 19.5 per 10,000 births, although estimates run as high as 30 per 10,000--about 12,000 babies a year.[76] Thousands more suffer from central nervous system abnormalities that are called Fetal Alcohol Effects.[77] The number of children with Fetal Alcohol Effects may be triple the number with FAS.[78]

Since American researchers first identified FAS in 1973, evidence has grown that its consequences endure for many years.[79] The Seattle Longitudinal Prospective Study on Alcohol and Pregnancy, which has followed children of women who drank while pregnant in 1974 and 1975, found that physical signs of FAS may become less distinctive with age, but developmental problems with intelligence, memory and attention persist at least to age 14.[80]

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* Data do not account for use of tobacco and illicit drugs.

Binge drinking and the number of drinks per occasion are strong predictors of problems, indicating that a high peak blood alcohol level is especially damaging.[81] Some experts caution that consuming an average of two drinks a day may lead to spontaneous abortion or neurobehavioral problems after birth.[82] Even lower levels of drinking have been linked to subtle learning and behavior impairment.[83] But some experts say research has not established that consuming two or fewer drinks per day poses any risk to the fetus of a well nourished pregnant woman who does not smoke and gets prenatal care.[84] Even so, because a safe level of drinking during pregnancy has not been established, the Surgeon General, the U.S. Departments of Agriculture and Health and Human Services, and many obstetricians recommend that women abstain from alcohol during pregnancy or if they are trying to get pregnant.[85]

As children with FAS become adults, they can achieve a wide range of self-sufficiency and intelligence. For example, some are illiterate, while others read at a high school level.[1] *If more physicians learn how to detect the signs of FAS in infants, early identification will make it possible to provide the support they need--from parents, health care providers and educators--to help them reach their full potential.*

[1] Streissguth, A. P. (1992). Fetal alcohol syndrome and fetal alcohol effects: A clinical perspective of later developmental consequences. In I. S. Zagon, T. A. Slotkin (Eds.), Maternal substance abuse and the developing nervous system (pp. 5-25). San Diego, CA: Academic Press.

The timing of alcohol use during pregnancy appears significant.[86] Drinking early in pregnancy can lead to physical malformations that characterize FAS.[87] Drinking later in pregnancy may retard the baby's weight gain and overall growth (length and head circumference). As a result, women who stop drinking during pregnancy are less likely to have babies who are born underweight or with small heads.[88]

Chart 27

The Link Between Drinking During Pregnancy and Infant Death

	Infant Mortality Rate *(per 1,000)*
Non-Drinking Pregnant Women	8.6
All Drinking Pregnant Women	13.3
< 2 drinks per day	12.7
≥ 2 drinks per day	23.5

Source: Centers for Disease Control & Prevention, National Center for Health Statistics, Linked Birth/Infant Death Data Set, 1991

Many newborns who were prenatally exposed to alcohol do well, but we don't know enough about what factors protect some or put others at risk. About six percent of alcoholic women have a child with FAS.[89] Rates of FAS are much higher among African American and Hispanic alcoholics who live in poverty, have low levels of education and get late or no prenatal care than among white alcoholics who have higher incomes and levels of education, and who get timely prenatal care--even though their rates of heavy drinking are similar.[90]

While the infant death rate among women who drink during pregnancy is 8.5 per 1,000 for whites, it jumps to 13.1 per 1,000 for Hispanics and 28.1 for African Americans (S) (CHART 28).*[91] The combination of heavy drinking and any smoking is particularly deadly. The infant death rate is 10.9 per 1,000 among white women who drink and smoke heavily during pregnancy; for black women who are both heavy smokers and drinkers, the death rate soars to 40.7 (S) (CHART 29).

One study of 84 alcoholic women found FAS at a rate of 70.9 percent among black and Hispanic women who drank an average of 12 drinks a day and 4.5 percent among white women of higher income and education who drank at similar levels.[92] A quarter of black and Hispanic women, compared to 61 percent of the white women, were married; 23 percent of black and Hispanic women, compared to 97 percent of the white women, were high school graduates. Such wide disparities suggest the importance of environmental factors in FAS.

Genetic factors also appear to play a role. Reports of alcohol-exposed fraternal twins, one with FAS and one with less severe or no apparent effects, indicate that fetuses have

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* Data do not account for use of tobacco and illicit drugs.

different levels of susceptibility to alcohol exposure, which are apparently genetic. This variance in susceptibility was not found in identical twins--who have identical genes.[93]

Cocaine

In the mid 1980s, reports of birth complications and developmental problems associated with cocaine flooded the popular press and sparked concern over the fate of "crack babies."[94] Yet few early studies on cocaine considered that "crack babies" are often also alcohol, tobacco, Valium, marijuana and/or other drug-exposed babies born to malnourished women with little or no prenatal care. Subsequent research, which avoided many shortcomings of early work, has confirmed some fears of the serious damage cocaine can do to the developing fetus. But many cocaine-exposed infants are surprisingly resilient, overcoming initial signs of physical and cognitive impairment; others show no apparent effects from their mother's prenatal cocaine use.[95]

Marijuana, the illicit drug most commonly used by pregnant women, may cause intrauterine growth retardation, low birth weight, cognitive deficits and jitteriness in children.[1] Much more research is needed to assess the impact of marijuana, the illicit drug most commonly used during pregnancy.

[1] Fried, P. A. (1993). Prenatal exposure to tobacco and marijuana: Effects during pregnancy, infancy, and early childhood. Clinical Obstetrics and Gynecology, 36(2), 319-337; Khalsa, J. H. et al (1991). Epidemiology and health consequences of drug abuse among pregnant women. Seminars in Perinatology, 15(4), 265-270; Zuckerman, B. et al. (1992). Prenatal cocaine and marijuana exposure: Research and clinical implications. In Zagon and Slotkin (Eds.), Maternal substance abuse and the developing nervous system (pp. 125-153). San Diego, CA: Academic Press; Day, N. L. et al (1991). Prenatal marijuana use: Epidemiology, methodological issues and infant outcome; Clinics in Perinatology, 18(1), 77-91; Parker, S. et al. (1990). Jitteriness in full-term neonates: Prevalence and correlates. Pediatrics, 85(1), 17-23.

But not all are so lucky. Cocaine use during pregnancy is linked to microcephaly (abnormally small head size) and prematurity.[96] Multiple drug use aggravates these

Chart 28

The Link Between Drinking During Pregnancy and Infant Death

by Race and Ethnicity

	Infant Mortality Rate *(per 1,000)*		
	White	Black	Hispanic
Non-Drinking Pregnant Women	7.0	16.0	6.9
All Drinking Pregnant Women	8.5	28.1	13.1
< 2 drinks per day	8.5	27.0	13.7
≥ 2 drinks per day	9.5	35.1	*

* The sample was too small to provide a death rate.

Source: Centers for Disease Control & Prevention, National Center for Health Statistics, Linked Birth/Infant Death Data Set, 1991

Chart 29

The Link Between Smoking and Drinking During Pregnancy and Infant Death

by Race

	Infant Mortality Rate *(per 1,000)*	
	White	Black
Non-Smoking, Non-Drinking	6.2	15.3
Smoking and Drinking:		
< 1 pack & < 2 drinks per day	8.8	30.5
≥ 1 pack & ≥ 2 drinks per day	10.9	40.7

Source: Centers for Disease Control & Prevention, National Center for Health Statistics, Linked Birth/Infant Death Data Set, 1991

consequences. Infants exposed to cocaine and other drugs have greater reductions in gestational age, head circumference and length than those exposed only to cocaine.[97] Because some women believe that cocaine initiates labor and eases the pain, they may use it intentionally to relieve the discomfort of pregnancy and induce labor, exacerbating the risk of prematurity.[98] Cocaine use has also been associated with abruptio placentae (premature detachment of the placenta), which can cause miscarriage, premature birth, stillbirth and hemorrhaging that endangers the woman's life.[99]

By triggering premature delivery, cocaine causes low birth weight.[100] Cocaine may also reduce a baby's weight by suppressing a woman's appetite or reducing blood flow to the fetus.[101] A study at Harlem Hospital found that, controlling for demographic and lifestyle factors (including tobacco and alcohol use) and gestational age, cocaine use was associated with an average weight reduction of a quarter of a pound (125 g); when women used cocaine as well as other illicit drugs, the average decrease was a third of a pound (195 g).[102]

Infants exposed prenatally to cocaine may be tremulous, irritable, erratic sleepers and unable to suck properly.[103] While these symptoms mimic signs of withdrawal from the drug, they more likely represent the effects of the drug itself on the infant. Although they do not require medication, such infants should be cared for in ways that are calming, such as being swaddled in a blanket, held firmly and rocked gently, in areas with dim lighting, low noise levels and soft music.[104]

Cocaine has also been linked to cognitive and neurobehavioral problems, although study results have been mixed, which makes it difficult to draw definitive conclusions. Some infants exposed to cocaine: have difficulty coordinating movement, which can make it hard

for them to roll over, lift their heads up, put thumbs into their mouths and walk; are easily overstimulated (shaking when startled, or breathing quickly and crying easily when aroused); and have trouble tracking visual stimuli.[105]

As cocaine-exposed infants grow up, they may be easily frustrated and act out because of their low tolerance for stimulation. They require stable home and school environments with predictable routines, rules, discipline and nurturing.[106] Behavior problems, such as antisocial and violent behavior, have been observed--but not scientifically researched--in children exposed to cocaine in the womb.[107]

Because babies can receive any drug used by a woman through her breast milk, mothers who do not stop using drugs, alcohol or tobacco may do harm to their children.[1]

- *Infants who are breast-fed by cocaine-using mothers may show signs of cocaine intoxication (such as hypertension, irritability and tremulousness).*
- *Cigarette smoking by nursing mothers has been associated with infant vomiting, diarrhea, restlessness and colic.*
- *The danger of drinking by breastfeeding women is unclear, but children of mothers who had at least one drink a day while breast-feeding have been found to have slightly poorer motor development at age one than women who had less than a drink a day.*

[1] Kharasch, S. et al. (1990). Unsuspected cocaine exposure in young children. American Journal of Diseases of Children, 144, 441; Chasnoff, I. J. et al (1987). Cocaine intoxication in a breast-fed infant. Pediatrics, 80(6), 836-838; Wilton, J. M. (1992). Breastfeeding and the chemically dependent woman. NAACOG's Clinical Issues in Perinatal and Women's Health Nursing, 3(4), 667-672; Little, R. E. et al. (1989). Maternal alcohol use during breast-feeding and infant mental and motor development at one year. New England Journal of Medicine, 321(7), 425-430.

Follow-up studies at ages two and three have compared children prenatally exposed to cocaine and drugs other than opiates (such as marijuana, alcohol and/or tobacco), those exposed to drugs other than cocaine (marijuana, opiates, alcohol and/or tobacco), and those with no evidence of prenatal exposure to alcohol or illegal drugs.[108] Few significant

differences in overall developmental scores (measuring mental and psychomotor skills) were found, and differences in weight and height that were apparent at birth had disappeared by age one. But children exposed to cocaine and other drugs continued to get overstimulated easily, and both drug-exposed groups had smaller head circumferences than unexposed children at age two. Cognitive functioning, measured by intelligence tests, was lower in the two drug-exposed groups, although three factors appeared to moderate this impact: quality of the home environment, child's head circumference and child's perseverance at tasks.[109]

Because families in these studies received exceptional services, including prenatal care, psychotherapeutic interventions for the mothers and early physical and speech therapy for the children, they represent a "best case" scenario. This and other research suggests that many children exposed prenatally to cocaine are remarkably resilient, given a positive home environment and early interventions.[110]

Other consequences of prenatal cocaine use remain uncertain. Research conducted in the early years of the crack epidemic found a high risk of SIDS in a small sample of cocaine users.[111] However, subsequent research has not replicated this finding. As a result, it is not clear how much of the risk may stem from cocaine use and how much may be a consequence of other factors such as smoking.[112]

Research has also suggested that cocaine may cause birth defects.[113] Studies have found an increased risk for congenital anomalies such as genitourinary tract malformations, but other research has found no significant impact of cocaine on birth defects after accounting for demographics such as income, education, race and the use of other drugs.[114]

Heroin

Heroin use during pregnancy has been linked to low birth weight, miscarriage, prematurity, small head size and intrauterine growth retardation.[115] Here again, however, many studies on such use do not account for other factors such as tobacco, alcohol and other drug use, lack of prenatal care, and poor nutrition.

Newborns exposed to heroin in the womb often experience withdrawal from the drug after birth. They shake with tremors; cry in high-pitched tones; have tight or tense muscles and clenched fists; are irritable and inconsolable; sleep, feed and breathe irregularly; vomit; and may even have seizures.[116] Using proper treatment and medication, doctors can stabilize these children.[117]

Her baby cried and seemed out of sorts. Nothing would settle her down. So, Jacqueline Rosetta Edwards did the only thing she knew to do. She fed heroin to her own 4-month-old daughter. Edwards told the police that she had been hooked on heroin and cocaine for a dozen years and assumed her daughter was born addicted as well. Instead of seeking medical help, she decided that small amounts of heroin would help the baby through withdrawal. "She said she gave it to the child to try to ease the withdrawal and calm it down because it would cry a lot and carry on," said the police department's Lt. Albert Scott. Age 28, she appeared in court this morning to answer charges of drug distribution and felony neglect and abuse.[1]

[1] Baker, Peter. Virginia mother allegedly gave heroin to her baby. Washington Post, 5/10/95, p. D3.

Edwards received a 10-year prison sentence and three years' probation. She will be required to serve at least 85 percent of the term.[2]

[2] Heroin fed to baby. Washington Post, 8/29/95, p. C4.

Some treatment providers maintain pregnant heroin addicts on methadone. They argue that methadone treatment can produce stable drug levels (preventing the peaks and valleys of heroin use), remove the woman from the dangerous environment of illegal drug sales, and lead to longer pregnancies than heroin use and normal developmental scores up to

age four.[118] But it is recognized as no panacea, and many pregnant women taking methadone continue to use other drugs.[119] At best, methadone use here is the lesser of two evils.

Prescription Drugs

Benzodiazepines--the tranquilizers commonly used to treat anxiety, epilepsy and insomnia--have been linked to birth defects, but not in reliable studies that take the use of other drugs into account.[120] Before the advent of benzodiazepines in the 1960s, doctors often prescribed barbiturates for these symptoms, and many women used or misused them during pregnancy.[121]

An estimated 22 million children in the U.S. were born exposed to phenobarbital, a barbiturate, from 1950 to the late 1970s.[122] Barbiturates double the risk of birth defects and can produce withdrawal in infants similar to that caused by heroin.[123] Some adult men prenatally exposed to phenobarbital had lower scores on intelligence tests than non-exposed men.[124]

Today barbiturates, such as phenobarbital, are still used medically during pregnancy to control epilepsy because physicians consider the risks of discontinuing the medication more serious than the increased chance of birth defects.[125]

The Next Drug

Like heroin in the 1970s and cocaine in the 1980s, another drug will come into fashion in the years ahead, hooking its users and spreading its damage to their children and

families. Amid indications that the crack cocaine epidemic may be subsiding, the next drug of choice may be methamphetamine, also know as "speed" or "ice."[126] Reports that amphetamine use is spreading rapidly have prompted concern over a new epidemic.[127]

> *A startling rise in the use of methamphetamine in California and the Southwest has raised fears among law enforcement officials that the trend toward dangerous stimulants could spread across the country much as crack did in the 1980s.... Young men use methamphetamine for sexual stimulation. Because the drug suppresses appetite, it has also been tried by teenage girls trying to lose weight.*[1]
>
> [1] Wren, Christopher. Sharp rise in use of methamphetamines generates concern. New York Times, 2/14/96, p. A16.

While little research has isolated the impact of amphetamine use during pregnancy, amphetamines have been linked to intrauterine growth retardation and prematurity, and newborns may experience withdrawal from the drug.[128] If an amphetamine epidemic emerges on the scale of the cocaine epidemic of the 1980s, then research to assess its impact on pregnancies, as well as on the patterns and effects of use to inform prevention and treatment efforts, will be desperately needed. Even more urgent is a major education campaign to inform women of the hazards of amphetamines and all other substances, including tobacco and alcohol.

Child Abuse and Neglect

Drug and alcohol abuse by either or both parents is a top cause and exacerbator of child abuse and neglect.[129] Alcohol and drug disorders increase the risk of child abuse five times and neglect nine times, after controlling for factors such as depression and social support.[130] Alcohol abuse is also a significant factor in sexual abuse of children.[131]

In a study of 200 alcoholic or opiate addicted parents, all children were abused or neglected to some degree; nearly a third were seriously neglected (30.5 percent); nearly a quarter were physically or sexually abused (22.5 percent).[132] Almost half (42 percent) of these parents had been abused by their own parents during childhood.

Perhaps more than any other drug, including heroin, crack cocaine becomes the primary "relationship" in the addict's life at the expense of any instincts about her welfare and that of her children.[133] Addicts experiencing intense cravings for crack may put fulfilling their desire for the drug above virtually everything else. Moreover, drug and alcohol abusing women are likely to have been victims of childhood abuse or neglect; caught in an intergenerational cycle, these women may be at high risk of becoming abusive or neglectful parents, easily frustrated by the irritability of children exposed to alcohol, tobacco and illicit drugs in the womb.[134]

While many long-term developmental consequences of drug use during pregnancy are uncertain, the high risk of abuse and neglect after birth is not. Wherever you find prenatal drug and alcohol abuse, you will likely find child abuse or neglect.

Charlene, a 33-year-old recovering crack addict, prostituted herself for crack and coaxed her children to steal after she sold her food stamps to buy drugs. She would disappear for days, even weeks, at a time, forcing her older children to play hooky to care for the baby. "When you get high, you know your children are there, you just don't care," she said. "All you care about is that next hit."[1]

[1] The crack in the system. Daily News, 12/4/95, p. 22; One sure way to save kids. Daily News, 12/5/95, p. 26.

It Takes Two: The Role of Dads

An important question is the role of a father's drug, alcohol or tobacco use on his newborn children. Only a handful of studies have sought the answer, but what research exists on animals and humans indicates that this area deserves further exploration.[135] Independent of maternal drinking, a third of a pound (137 g) reduction in birth weight has been found for infants born to fathers who, in the month before conception, drank two or more drinks per day or had at least five drinks on one occasion.[136]

Smoking fathers have an indirect impact on fetal development. The risk of SIDS rises in infants born to women passively exposed to smoke by fathers during pregnancy, as well as to infants passively exposed to their fathers' smoke after birth.[137] Children of nonsmoking mothers and fathers who smoked more than a pack a day during the mother's pregnancy can weigh a fifth of a pound (88 g) less than children whose parents did not smoke.[138]

Violence against pregnant women is often related to their and their partner's substance use. Male drug and alcohol use is linked to spousal violence, and pregnant women who are battered are more likely to use alcohol and drugs than other pregnant women.[139]

Health and Social Welfare Costs

It is difficult to estimate the total health and social welfare costs of substance abuse to the U.S. because no such comprehensive study has been undertaken, and because smaller cost studies either overlap or produce inconsistent results. However, based on previous CASA analyses, we think the health and social welfare costs approach $10 billion.

The health care costs of caring for babies prenatally exposed to alcohol, tobacco and/or illicit drugs came to some $6 billion in 1995.[140] Most of the bill--$5.8 billion--stems from hospital care at birth. After discharge, costs for treatment of congenital anomalies and low birth weight add another $132 million; these are undoubtedly a low estimate of post-discharge costs because providers often fail to note that many other medical problems during infancy may be the result of prenatal alcohol, tobacco and drug use.

In 1990, the U. S. General Accounting Office estimated that hospital charges in 1989 for infants exposed to illicit drugs were up to four times greater than those for drug-free infants. At one hospital, the median charge for drug-exposed infants was $5,500, compared to $1,400 for non-exposed infants--an added cost of $4,100.[141] A study in New York City put the average cost of additional medical care in the hospital for newborns exposed to cocaine and possibly other drugs at nearly $5,200 in 1990.[142] In another study in New York City, infants exposed to cocaine and other drugs, including nicotine, stayed in the hospital about seven days longer than drug-free newborns at an additional cost of $7,731.[143]

Boarder babies are a tragedy that adds to health care costs. The cost of caring for these babies, even if they have no medical complications, ranges from $200 to $500 a day--or up to $15,000 a month.[144] With an average stay of four months for these children, the bill can reach $60,000.[145]

After release from the hospital, costs continue to mount. In 1990, the Florida Department of Health and Rehabilitative Services estimated that by age 18, the cost of

services such as hospital costs, foster care and special education, for a child with physiologic or neurologic impairment would reach at least $750,000.[146]

Take foster care: A survey of 10 hospitals in 1989 found the cost of one year in foster care for 1,200 drug-exposed infants to be $7.2 million.[147] Given that in 1991, some 49,000 children under age three, prenatally exposed to drugs, were in foster care, the annual cost of foster care for the youngest drug-exposed children was some $325 million.*[148] In New York City alone about 43,000 children are in foster care, and 77 percent of the foster care budget in 1994 ($595 million of the $775 million) was attributable to parental drug and alcohol abuse.[149] If parental substance abuse is a factor in three-quarters of all foster care placements across the nation, the cost would be about $3 billion.[150]

Licit drugs also take their toll. The total cost to the economy of FAS (both for treatment and from lost productivity) was about $2.7 billion in 1995.**[151] The cost of low birth-weight infants in neonatal intensive care because of their mother's cigarette smoking is estimated to be as high as $792 million per year.[152] The cost of caring for individuals with FAS, including medical care expenses and institutional stays for those who are mentally retarded, is at least $90 million.**[153]

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* This cost was adjusted to 1991 dollars using the Consumer Price Index.

** These costs were adjusted to 1995 dollars using the Medical Consumer Price Index.

V.

Combatting the Problem

To be effective for women, any concerted effort of prevention, treatment, law enforcement and research must take into account how markedly women and men differ in their risk factors, physiology, psychology and patterns of abuse and addiction.[1] Each stage of a woman's life is also unique, and the impact of tobacco, alcohol or drug use varies during adolescence, when their development into a healthy, productive adult is at stake; during pregnancy, when their actions affect not only themselves but the health of their children; or later in life, when their health determines how much independence and opportunity they'll enjoy in their golden years. Each stage requires a tailored response.

Prevention

Public education campaigns should explain how substance abuse may lead to severe health and social consequences for women and the unique perils of tobacco, alcohol and drug use and abuse during pregnancy. Each woman should know why she should not drink as much as men, how differently from men she metabolizes alcohol, how much more rapidly she will suffer alcohol-related illnesses, how alcohol suppresses physical sexual response and causes or aggravates sexual dysfunction, how poorly heavy drinking serves to ease tension or stress, and how her alcohol or drug use can make her more vulnerable to unwanted sexual advances, rape and violence.[2]

The different risk factors that mark women's substance abuse and addiction create opportunities for targeted prevention. Antecedents such as a family history of alcohol or drug abuse; abuse and violence during childhood, adolescence or adulthood; depression; and substance abuse by a partner serve as warnings for women. These women may be found in physicians' and psychologists' offices, mental health clinics, support groups for children of alcoholics, domestic violence shelters, family planning clinics, jails, child care centers, supermarkets, aerobics classes and churches.[3] All these sites and situations offer opportunities for prevention.

Children and Teenagers

Adolescence is a time of high susceptibility to substance abuse and a critical window for prevention. To be effective, prevention efforts here must recognize the different factors that motivate girls and boys.[4] Girls who have been sexually abused should be taught the dangers of self-medicating with alcohol or drugs and offered alternative ways to cope with the trauma of such abuse.[5] Women are more likely than men to say they began binge drinking and smoking marijuana as teenagers to ease stress or get away from their troubles.[6] Strong family bonds and peer disapproval may discourage girls more than boys from alcohol or drug abuse.[7] Girls whose peers disapprove of drinking are 80 percent less likely to be problem drinkers than boys with such peers.[8]

Smoking by girls deserves special attention. In addition to the deadly consequences of smoking, tobacco is more strongly linked to illicit drug use for girls than for boys.[9] While male drug users often use alcohol as a gateway substance before moving onto illicit

drugs, female drug users are more likely to start smoking cigarettes (sometimes in addition to drinking) before such use. Prevention efforts must start early because nicotine addiction takes hold quickly.[10] Among females ages 12 to 24 who smoke five or fewer cigarettes a day, 52 percent already feel dependent; of those who smoke six to 15 cigarettes daily, 81 percent consider themselves hooked.[11] Women in their 20s who began smoking at or before age 13 have a harder time quitting smoking than those who started later--another indication that prevention campaigns focused at the preteen and early teen years are critical.[12]

Warning signs of problem drinking by adolescent girls:[1]

- ***Peer use of alcohol***
- ***Expectation that alcohol will "provide a high" or be disinhibiting***
- ***Antisocial or aggressive behavior, temper tantrums, shoplifting or vandalism***
- ***Frequent absences from school and low educational aspirations***
- ***Alienation***
- ***Early experience with alcohol intoxication***
- ***Early use of marijuana***
- ***Family history of alcohol abuse and dependence, marital conflict or inadequate parenting***

[1] Gomberg, E. S. L. (1994). Risk factors for drinking over a woman's life span. Alcohol Health and Research World, 18(3), 220-227.

An important factor in the relative ineffectiveness of public health campaigns against smoking during the 1960s and 1970s with respect to teenage girls was their failure to take into account the different reasons that girls and boys smoke--reasons that tobacco companies have exploited.[13] Teenage girls are often obsessed with weight. The desire to be thin motivates girls far more than boys.[14] Girls may also use smoking as a way to deal with depression or anxiety.[15] For girls, teaching healthy methods of weight control, boosting

self-esteem and finding alternative ways to cope with problems are integral to smoking prevention.[16]

Prevention campaigns targeting teenage girls should deglamorize smoking and show its immediate and distasteful effects to counter tobacco advertising that emphasizes thinness and sexy independence.[17] For example, the bumper sticker that says, "Kissing a Smoker is Like Licking a Dirty Ashtray" emphasizes the short-term consequences of smoking, such as unpleasant smells, yellow teeth and less attractiveness to the opposite sex.[18] Challenging the belief that smoking is socially acceptable and common among their peers (the idea that "everybody's doing it") may also be effective. It is imperative to address teenage girls' concerns about weight and body image and give them a better understanding of how to stay healthy as part of any anti-smoking effort directed at them.

Women's magazines bear a special responsibility here.[19] Critics charge that magazines such as McCall's and Woman's Day have courted tobacco advertising by providing scant coverage of the dangers smoking poses to women.[20] Teenage girls may be particularly reliant on what they learn from such media. High school girls name the mass media as the best source of information on alcohol and drugs (25.2 percent), more important than friends (17.2 percent), personal experience (16.6 percent), family (14.2 percent), their doctors (7.8 percent) and their teachers (6.4 percent).[21] While alcohol and drug education by parents, teachers,

Many leading women's magazines have a substantial readership among teenage girls. Glamour and Vogue are both read by more than 2.6 million girls ages 12 to 19. Other magazines, such as Family Circle and McCall's, reach the mothers of more than a million teenage girls.[1]

[1] Kaiser Family Foundation. (1996). "Leading Women's, men's, teens' and minority magazines by circulation and readership."

clergy and other adults is important, it must be reinforced by communication of the dangers of substance abuse in magazines, television shows and movies that girls read and look to for role models.

Girls appear to be more responsive than boys to warnings about the hazards of drug, alcohol or tobacco use; if they think a substance is dangerous to their health, they are less likely to use it.[22] In a survey of 5,891 eleventh-graders in Ohio during 1977, 1980 and 1983, girls perceived most substances--but not cigarettes--as more harmful than boys did, and this perception translated into lower levels of use among girls.

Another element of prevention for children and adolescents is reducing the supply of the substance. In a 1994 study in Massachusetts, 12 youths (ages 12 to 17) made 480 attempts to buy tobacco products from vending machines and over-the-counter retailers.[23] Only 28 percent of vendors consistently did not sell to minors. Girls were one and a half times likelier to be successful at purchasing cigarettes, even when taking into account how old they looked.* "It's the Law" programs sponsored by the tobacco industry--where stickers with the legal age to buy tobacco products are displayed on tobacco vending machines and in store windows--had no impact; vendors in these programs were just as likely as other vendors to sell to children and teenagers.

Young Adult Women: At College and in the Workforce

Alcohol advertisers are targeting young women as a "growth market" by trying to make their drinking more socially acceptable.[24] Prevention of heavy drinking is particularly

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* "Apparent age" was measured by asking individuals who did not know the youths to guess their ages.

important for women on college campuses. Nationally, women are still less likely than men to binge drink at college (39 percent vs. 50 percent); however, here again the gap appears to be closing. In Massachusetts the percentage of women in their first year of school who drink "to get drunk" tripled from 10 percent in 1977 to 34 percent in 1989.*[25] At the University of Wisconsin in Milwaukee, beer consumption among women rose 34 percent over roughly the same period.[26] Eighty percent of sorority members and 50 percent of women involved in college athletics nationwide binge drink; both are important targets for prevention campaigns.[27] At the University of Alabama, women and men were found to be equally likely to get drunk whenever they drink (45.1 percent vs. 46.1 percent).[28] Some women feel pressured to keep up with men when drinking. "If you can't drink with the guys, people don't respect you as much," said a female student at William and Mary College.[29]

Young employed women are another high risk group.[30] Relative to women who are homemakers, employment outside the home appears to increase the likelihood that a women will drink heavily.[31] There is some evidence that women who work in male-dominated occupations tend to drink more heavily than those in female-dominated occupations.[32] Possible reasons

Karen Valenstein...the highest-ranking woman in the public-finance department of E.F. Hutton & Company and one of the pre-eminent women in investment banking...has an intuitive understanding of masculine culture, with all its aggressiveness, competition and politics; she also has a genuine enthusiasm for living by its fierce rules. By her own admission, she can trade locker-room vulgarities [and] belt back stingers until dawn....[1]

[1] Gross, Jane. Having, getting, earning, eating. New York Times Magazine, 4/14/96, p. 136.

* Wechsler, et al, (1994) define binge drinking as four or more drinks in a row for women and five or more drinks in a row for men.

range from the stress of being a "token" female to the possibility that these women want to be--or feel pressured to be--"one of the boys."[33]

Drinking, Smoking and Drug Use During Pregnancy

The best time to prevent smoking, drinking and drug use during pregnancy is before conception. During the first trimester, when many women do not even realize they are pregnant, the fetus is particularly susceptible to the effects of tobacco, alcohol and drugs.[34] According to the 1988 National Maternal and Infant Health Survey, 45.4 percent of recent mothers reported drinking in the three months before they learned they were pregnant.[35] The association of alcohol and illicit drug use with amenorrhea (ceasing menstruation) exacerbates this problem, because a woman using alcohol or drugs cannot rely on a missed period as a sign that she is pregnant.[36]

Prevention of Fetal Alcohol Syndrome (FAS) requires educating all women of child-bearing age about the dangers of alcohol use during pregnancy, as well as identifying and treating alcoholic women before they become pregnant.[37] One way doctors and other health professionals can identify a woman at risk of having a child with FAS is to evaluate her older children.[38] The chance that an alcoholic woman will have a child with FAS is about 6 percent. But if her first child was born with FAS, the odds jump to 70 percent for the next one.[39]

For the child, the first step is diagnosing FAS. Unfortunately, the disorder appears to be widely under-reported.[40] Even when physicians identify FAS, they are often reluctant to note the diagnosis on the child's records, thinking it's not necessary for appropriate

treatment.[41] This attitude not only denies these children services they may need, but also hinders prevention efforts for future babies.

Warning Labels. Alcohol warning labels can help educate some women about the risks of drinking while pregnant. In the late 1970s and early 1980s, some state and local governments required the display of warnings about alcohol-related birth defects in bars and other locations where alcohol is sold.[42] In 1988, the federal government mandated that alcohol bottles carry similar warning labels.*[43] While these efforts may contribute to a drop in light or moderate drinking during pregnancy, their efficacy in preventing the most serious alcohol-related birth defects, such as FAS, is dubious.

An obstacle to prevention is the fact that many women know someone who smoked or drank during pregnancy and delivered an apparently unharmed child.

◆ *Alcohol warning labels appear to inspire a small but significant decline in drinking among women pregnant with their first child, but to have no impact on pregnant women with at least one child, suggesting that they discounted the warning because of their own experience.*[1]

◆ *In a study of pregnant teenagers who smoke, family members or friends who smoked during pregnancy and delivered "healthy" babies were an important model. A typical comment was, "Five of my friends smoked a pack a day. Their babies are healthy."*[2]

[1] Hankin, J. R. et al. (1996). Heeding the alcoholic beverage warning label during pregnancy: Multiparae versus nulliparae. Journal of Studies on Alcohol, 57(2), 171-177. [2] Lawson, E. J. (1994). The role of smoking in the lives of low-income pregnant adolescents: A field study. Adolescence, 29(113), 61-79.

A study of 12,000 black women found that alcohol warning labels appeared to lead to a slight decrease in drinking among pregnant women who were light drinkers, but to have no significant impact on heavier drinkers.[44] Another study found that nearly three-quarters of

* The label says: "Government warning: According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects."

women of child-bearing age did not recall the information on labels; African American women were least likely to do so.[45] Warning labels do not deter heavy drinkers, who are at greatest risk of having a child with FAS; helping such women to stop drinking requires much more.[46]

Prenatal Care. When efforts to deter alcohol, tobacco or drug use before conception fail, prevention efforts can reduce the risk of further damage to the child by discouraging continued substance use or abuse among women who are already pregnant and, if necessary, referring them to treatment.[47] Women who stop drinking, smoking or using drugs during their pregnancy can improve the overall health of their child and increase the birth weight.[48]

Illicit drug users who receive prenatal care have healthier babies than those who do not in terms of growth and prematurity.[49] During prenatal visits, doctors and nurses can identify addicts, refer them to treatment and provide ongoing support and encouragement.[50]

Because even minimal efforts by health care providers can help women quit smoking, routinely incorporating advice on smoking cessation into prenatal visits can have a substantial impact.[51] Brief physician advice, counseling and encouragement to stop smoking increases the likelihood of quitting.[52] At each visit, doctors should urge a smoker to quit and personalize the message by relating it to her individual health.[53] Cessation programs that reinforce physician's advice with printed materials, home visits and/or phone calls can increase success.[54]

Yet doctors and nurses often miss these opportunities. In a sample of 56 pregnant drug users, while most got prenatal care, their physicians did not refer them for treatment.[55] Pregnant African American women are 20 percent less likely to be advised to quit smoking

and 29 percent less likely to be advised to quit drinking during a prenatal care appointment than are white pregnant women, after taking into account age, marital status, income, payment type and pregnancy history.[56] This is particularly disturbing given higher rates of FAS and infant mortality among black women.[57]

Most addicted pregnant women receive no prenatal care at all.[58] Lack of access to prenatal care, long waits for appointments and the need to travel long distances to clinics deter pregnant women from seeking help--particularly those with jobs that pay by the hour.[59] For pregnant addicts, assuring access to prenatal care is not enough; she may require aggressive outreach, transportation and follow-up.[60]

Doctors often miss or ignore signs of drug use by pregnant women. One women told of her experience with doctors when she was pregnant. "The first one--I got up my nerve and told him right out I was an addict. It didn't seem to affect his plans for me or my baby one bit. It was like he just did not want to hear me--he ignored what I said. So I went to another doctor. He never even asked [about my drug use] and I didn't tell him."[1]

[1] U.S. General Accounting Office. (1991). ADMS Block Grant: Women's set-aside does not assure drug treatment for pregnant women. Washington, DC: GAO.

After Menopause

Alcoholism tends to take hold later in women's lives than in men's.[61] Women at high risk because of "role deprivation" from recent divorce or separation have been the target of a prevention program in California that provides workshops in stress management and life and career planning, as well as alcohol education.[62] Women who completed the program had higher self-esteem and used alcohol and drugs less than a similar group who didn't participate in it.

Among elderly women, the physician's role in preventive education and counseling is especially important because these women may be unaware of their increasing vulnerability to alcohol's effects and dangerous interactions that it can trigger with prescription drugs.[63] Elderly women may also be lonely and isolated from family and friends who otherwise might detect early signals of problem drinking and intervene.[64]

To avoid dangerous interactions with other drugs or alcohol, doctors who prescribe psychoactive drugs to elderly women should:

- *Screen carefully for drug and alcohol abuse before prescribing any drug for depression.*
- *Discontinue as many drugs as possible before starting the psychoactive drug.*
- *Prescribe small doses and increase doses cautiously.*
- *Warn patients of the dangers of mixing sedating drugs with alcohol.*[1]

[1] Richelson, E. (1984). Psychotropics and the elderly: Interactions to watch for. Geriatrics, 39(12), 30-42.

Treatment

Despite claims that addicted women are harder to treat than men, women do not fare worse in treatment.[65] Though most studies on treatment outcomes do not examine gender variations, those that do find little difference between the sexes for the success of alcohol, tobacco or drug treatment.[66] An analysis of 20 studies on alcohol treatment found only small differences: women did slightly better in the first 12 months after treatment, and men did slightly better after the year.[67]

However, women who need treatment for alcohol problems are less likely than men to get it. The 1992 National Drug and Alcohol Treatment Utilization Survey (NDATUS) found the ratio of men to women in alcoholism treatment was 3.5:1, compared to a ratio of alcohol

abuse or dependence of 2.4:1.[68] On the other hand, the 1992 NDATUS found a ratio of men to women in drug treatment of 1.8:1, compared to a drug abuse or dependence prevalence ratio of 2.3:1.[69] But these ratios miss a central point: the National Association of State Alcohol and Drug Abuse Directors estimated that in 1989 only 13.7 percent of all women and 11.9 percent of pregnant women who need treatment receive it.[70]

In 1989, the U.S. House of Representatives Select Committee on Children, Youth and Families surveyed 18 hospitals nationwide and found that in Los Angeles, pregnant women had to wait 10 to 16 weeks for drug treatment, and in Boston, the 30 residential treatment slots for pregnant women addicted to cocaine throughout the city fell short of the 300 cocaine users who delivered at just one hospital.[71] Two-thirds of the hospitals reported having no place to refer pregnant substance abusers for treatment.[72] In California, despite the addition of nearly 200 programs to serve pregnant and parenting women, 272 pregnant women were on waiting lists for drug treatment in 1993.[73]

One reason for the lack of treatment for pregnant women is fear of legal liability if treatment fails to protect the child, and/or because of the potential impact of some medications during pregnancy.[74] In New York State, the Office of Alcoholism and Substance Abuse Services argues that pregnancy "in and of itself" is not a justifiable basis to deny treatment.[75]

The Ways and Odds of Referral

Even where slots are available, the ways in which women tend to be identified as candidates for treatment may hinder their entry to treatment.[76] Physicians, the legal system

and employers are less likely to refer women to treatment.[77] Three effective early intervention methods--drunk-driver rehabilitation, public-intoxicant intervention and employee assistance programs--reach higher proportions of male problem drinkers than female.[78] This may be because men tend to exhibit alcohol abuse publicly while women tend to be more inner-directed. Police appear less likely to arrest women than men who are caught driving drunk.[79]

In a study of 3,234 public and private employees in work settings, these factors combined to result in fewer referrals to alcoholism programs for women: male supervisors were less likely to identify women who were alcoholics than female supervisors; men were uncomfortable discussing drinking with female subordinates; and female employees seemed to make greater efforts to conceal drinking than male employees.[80] Among those who do enter treatment, women and men are just as likely to return to work, indicating that effective employee assistance programs work just as well for both genders.[81]

Among adolescents, fewer girls than boys with alcohol or drug problems get involved with the courts, where referrals to treatment often occur; but more girls are referred by parents.[82] Girls ages 12 to 19 in treatment for alcohol or drug problems also are less likely than boys to get into trouble at school.[83]

School nurses are in a unique position to identify and offer support to teenage girls who are substance abusers. They can ask about risk factors, such as physical or sexual abuse, and provide crisis intervention and referrals. They also can help prevent relapses as teens who have been in treatment return to school and need assistance finding drug-free peers.[1]

[1] Tuttle, J. (1993). Adolescent substance abuse: Psychosocial factors. Journal of School Nursing, 9(3), 18-25.

A study of 305,000 alcoholic patients in treatment found analogous referral patterns

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among the elderly.[84] Elderly men are more likely to have a legal referral (29 percent vs. 13 percent) than women, while elderly women are more likely to have a medical (12 percent vs. 9 percent) or a personal referral (self, employer, church, school, spouse, family or friend; 51 percent vs. 42 percent).[85]

Among female alcoholics, the top four reasons for entering treatment are psychological consequences such as deepening depression, the physical and medical effects of alcohol, troubles with husband or children and trouble with the police.[86] In contrast, alcoholic men identify trouble on the job and with the law as the top reasons they entered treatment.[87]

Such differences point to important opportunities--too often missed--for identifying substance abusing women and helping them, as one expert put it, "in doctor's offices, in hospitals and health clinics, in obstetric practices and gynecological clinics, in family and social service agencies, and in the offices of divorce lawyers."[88]

Physicians: See, Speak and Hear No Substance Abuse in Female Patients?

Women see physicians more often than men, and the prevalence of alcohol disorders among women who seek medical attention is at least double that in the general population.[89] This imposes a responsibility on family practice doctors, gynecologists, obstetricians, pediatricians and other health care professionals to spot signs of substance abuse in their female patients and provide referrals and ongoing support to get them into treatment.[90] Gynecologists are often a woman's only doctor; because sexual dysfunction is associated with

alcoholism, routine screening by gynecologists can be an effective way to identify women for treatment.[91]

Yet physicians are less likely to diagnose abuse and addiction in women than in men.[92] In one study, hospital doctors were three times more likely to fail to diagnose a female alcoholic than a male alcoholic.[93] At Johns Hopkins Hospital, physicians were found less likely to identify alcoholics who were female, especially those with private insurance or higher incomes and education.[94]

A national panel of doctors, insurance company representatives, public officials, business leaders and leaders in medical education concluded, "The primary-care specialties have done an inadequate job of training and preparing physicians in the treatment of substance-abusing patients." Such training, the panel said, should be required for all residents in family practice, internal medicine, obstetrics and gynecology and pediatrics.[1]

[1] Gilbert, Susan. Doctors found to fail in diagnosing addictions. New York Times, 2/14/96, p. C8.

The reasons for this are many. If women have a substance abuse problem, they are likely to see a doctor for the medical or psychiatric symptoms associated with their abuse, such as digestive difficulties, insomnia or depression, rather than for the problem itself; indeed, the stigma of substance abuse may cause them to hide their alcohol or drug abuse.[95] By emphasizing a woman's psychological symptoms over her physical symptoms, doctors may attribute her alcohol-related problems to depression.[96] These physicians often exacerbate a drug or alcohol problem by inappropriately prescribing psychoactive drugs and failing to refer women to treatment.[97]

Screening instruments that measure the quantity and frequency of drinking often do not take into account women's different metabolism of alcohol and the fact that many female alcoholics drink less than male alcoholics.[98] Assessment tools tend to focus on alcohol-

related issues that are more common among men, such as legal and job troubles, rather than those more relevant to many women, such as family conflict, violence, sexual abuse and reproductive dysfunction.[99]

Among the elderly, medical conditions such as depression, anxiety and insomnia can mask the signs of alcohol abuse, while dementia can substitute as a diagnosis for alcohol-related behavior.[100] Physicians may also fail to adjust for a woman's declining tolerance for alcohol.[101] What might be considered light or moderate drinking in her 30s can have serious health effects in her 60s or 70s. Adding to these concerns is evidence that elderly women who abuse alcohol are more likely than men to use prescribed psychoactive drugs and less likely to seek treatment.[102]

Some recovering female alcoholics report that doctors were unhelpful or even discouraged them from seeking help:[1]

- *"The priest sent me to a doctor, and he referred me to a psychiatrist."*
- *"I wrote to the analyst and he wrote back, 'You're too smart to be an alcoholic. Just don't drink!"*
- *"I was having all these medical problems. The doctor asked if I was a heavy or a light drinker. Well, I didn't want to lie. So I would mock him. 'What's heavy and what's light?' I asked. When he said a heavy drinker drank every day, I had it beat. I didn't drink every day. But of course, when I did drink, I just kept on until I was through!"*

[1] Smith, A. R. (1986). Alcoholism and gender: Patterns of diagnosis and response. Journal of Drug Issues, 16(3), 407-420.

With these differences in mind, routinely taking a thorough history of use of alcohol, tobacco, and licit and illicit drugs is an important step toward identifying female substance abusers and getting them help.[103] Characteristics associated with women's alcohol abuse, such as depression, family problems, an alcoholic partner or a family history of alcoholism, should serve as red flags to physicians.[104] Questions to elicit more information include:

"Do you ever carry an alcoholic beverage in your purse? How has your drinking changed during pregnancies? What effect do you feel your drinking has had on your children?"[105] Doctors can ask elderly women, "Did you find your drinking increased after someone close to you died? Does alcohol make you sleepy so that you often fall asleep in your chair?"[106]

If a physician determines that the woman has alcohol-related problems, he should advise her to cut down or abstain.[107] For patients who are not dependent, strategies to help quit include setting a specific drinking goal and helping patients recognize and cope with triggers for drinking. For alcohol-dependent patients, physicians can outline the available treatment options and schedule an appointment for the woman while she is in the office. Physicians (and nurses) can continue to monitor their patients' drinking behavior at subsequent appointments or by keeping in contact with their treatment program.

A screening tool known as the "CAGE" questionnaire identifies up to 90 percent of alcoholics with four simple questions:

- *Have you ever felt you ought to Cut down on your drinking?*
- *Have you ever been Annoyed by criticism about your drinking?*
- *Have you ever felt Guilty about your drinking?*
- *Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (an Eye opener)?*

If a woman answers yes once or more, or drinks either at least eight drinks per week or at least four drinks per occasion, her physician should learn more about her patterns of use, reasons for drinking, any alcohol-related medical problems and her family history of alcoholism.[1]

[1] National Institute on Alcohol Abuse and Alcoholism. (1995). The physicians' guide to helping patients with alcohol problems. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism; Cyr, M. G. and Moulton, A. W. (1993). The physician's role in prevention, detection, and treatment of alcohol abuse in women. Psychiatric Annals, 23(8), 454-462.

Barriers to Treatment

The shortcomings of referral routes are only one of the barriers to treatment women face. They also face a paralyzing lack of child care options.[108] Only 33 percent of women-only treatment sites and 6 percent of other treatment units provide child care for clients.[109] A 1993 survey of drug treatment programs in five cities found that most accept pregnant women (83 percent of outpatient and 70 percent of residential programs), but only about 20 percent both accept pregnant women and provide child care. In three of the five cities surveyed, no residential treatment programs accepted pregnant women and provided child care.[110]

Barriers to treatment for women[1]

External barriers:

- *Different referral patterns*
- *Inadequate training of health professionals*
- *Opposition by family or friends*
- *Inadequate financial resources and insurance*
- *Comprehensive services not in a single location*
- *Lack of child care facilities*
- *Male-oriented treatment services*

Internal barriers:

- *Denial of the problem*
- *Guilt and shame*
- *Fear of stigmatization*
- *Fear of leaving or losing children*

[1] Beckman, L. J. (1994). Treatment needs of women with alcohol problems. Alcohol Health and Research World, 18(3), 206-211.

As a result, female addicts who seek treatment may be forced to choose between leaving their children alone or with inadequate caretakers, placing their children in foster care or losing custody of their children altogether.[111] With these choices, many decide not to enter treatment. Offering child care to these women eliminates the need to make such a

choice. PAR Village, a Florida residential treatment program, found that women allowed to bring their children to the program were five times more likely to stay for a year and, overall, stayed about three times longer than women not offered on-site child care.[112]

Women who seek treatment are more likely than men to lack support or face opposition from their spouses and family.[113] Alcoholic women are more often divorced in the course of their alcoholism than are alcoholic men.[114] A study of 6,400 employees at 84 worksites found that women with alcohol problems who entered treatment through an employee assistance program were less likely than men to have family support in seeking help for their problem.[115] Most women were unmarried (68 percent had never married or were divorced or separated).[116] Even when the women were married, their spouses were less likely to play a role in their getting help.[117] At the Betty Ford Clinic in California, female patients often report that they delay seeking treatment because their husbands and children pressed them to stay home and care for the family.[118]

The stigma of drinking as unfeminine and inappropriate for women may lead husbands to deny their wife's alcoholism.[119] A study of 10 male and 10 female alcoholics found women were more likely to be the first to identify their alcoholism, while men were more often identified by wives or families.[120]

A recovering alcoholic woman described her husband's denial of her situation:[1] *"Even after I'd been through treatment, I'd have a hard time at home. My husband kept telling me, 'You're not an alcoholic. You can have a drink if you want to.' What he meant was if he wanted me to! Anyway, eventually, it was a choice I had to make: leave and live, or drink again."*

[1] Smith, A. R. (1986). Alcoholism and gender: Patterns of diagnosis and response. Journal of Drug Issues, 16(3), 407-420.

Financial concerns and transportation problems are also barriers that affect women more often than men, if only because more of them are poor.[121] Unemployment rates among drug-addicted women run as high as 80 percent;[122] many rely on Medicaid, which treatment providers often do not accept.[123]

Special Treatment Needs

Beyond removing barriers to access, successful treatment programs for women must address their psychological and social needs, such as childhood sexual abuse, eating disorders, domestic violence, depression, post-traumatic stress disorder, personal shame and lack of parenting skills.[124] Childhood sexual abuse can lead to distrust, depression, anxiety, shame and poor self-image, which can hinder recovery from addiction.[125] Female survivors of sexual abuse start using alcohol and drugs at younger ages and use them more to self-medicate and escape family problems than other girls.[126] Because they may continue to do so if they return to the same environment, addressing family problems in treatment may be essential to prevent relapse.[127] Similarly, screening for spousal violence is necessary not only because it affects how women respond to treatment, but because those who return to violent relationships tend to relapse.[128]

Pregnant and parenting drug users, whose development may be arrested at age levels when their drug use began, often need parent education courses to teach them how to care for their children and to bolster their own recovery.[129] Many of these women lack adequate role models in their own parents and suffer low self-esteem and guilt over their substance use, which undermines relationships with their children. Often they have

unrealistic expectations for their children's cognitive and emotional development and for their ability to control their children's behavior.[130]

Many female addicts also need basic medical care, which facilities for women frequently do not offer.[131] Many lack basic skills needed to get jobs; pregnant drug abusers have been found to have an average of sixth grade math skills and seventh grade reading skills.[132] In addition to treatment, these women need drug-free housing, education and job training.[133]

Providing comprehensive services in one place may be necessary to retain women in treatment. A program at King/Drew Medical Center in Los Angeles found it nearly impossible to keep a substance abuser in both prenatal care and drug treatment if both services were not offered at the same location. When the Center incorporated prenatal care, primary care, parent-child programs and substance abuse treatment at one site, the savings from reduced prematurity among just 40 women were $1 million.[1]

[1] Haughton, J. G. (1992). The linkage: Substance abuse treatment and primary care. Paper presented at Strengthening the Linkages, a Secretarial Conference on Primary Care and Substance Abuse Linkage, Washington, DC; Haughton, J. G. (1993). Substance abuse prevention: A perinatal perspective. Paper presented at The Cost-benefit of Substance Abuse Prevention, Washington, DC.

Some researchers and treatment providers believe women do better in all-female settings. The environment may be more nurturing and supportive, and women may feel more comfortable speaking about issues such as domestic violence, sexual abuse and incest, shame and self-esteem in groups without men.[134] Female treatment providers can also serve as role models.[135] In co-ed settings, women are less likely to attend group therapy than men, and when they do, they are less likely to talk.[136]

Founded in 1935, Alcoholics Anonymous (AA) initially was designed for men. As late as 1968, only 22 percent of its members were female.[137] Women for Sobriety was founded in 1976 as a program designed to address why females drink, with the belief that

traditional mutual-help groups such as AA inadequately served women.[138] During the 1970s and '80s, representation of women in AA grew and women-only AA groups spread across the country.[139] By 1992, at least 35 percent of all AA members were women.[140]

Confrontational therapy programs, which aim to push addicts to shed their denial and assume responsibility for their behavior, may backfire on women by reinforcing feelings of shame, low self-esteem and depression.[1]

[1] O'Connor, L. E., Berry, J. W., Inaba, D., Weiss, J. and Morrison, A. (1994). Shame, guilt, and depression in men and women in recovery from addiction. Journal of Substance Abuse Treatment, 11(6), 503-510; Burman, S. (1994), The disease concept of alcoholism: Its impact on women's treatment. Journal of Substance Abuse Treatment, 11(2), 121-126; Quinby, P. M. and Graham, A. V. (1993). Substance abuse among women. Primary Care, 20(1), 131-140; Tracy, C. E. and Williams, H. C. (1991). Social consequences of substance abuse among pregnant and parenting women. Pediatric Annals, 20(10), 548-552; Watson, R. R. (Ed.). (1994). Addictive behaviors in women. Totowa, NJ: Humana Press; Wells, D. V. B. and Jackson, J. F. (1992). HIV and chemically dependent women: Recommendations for appropriate health care and treatment services. International Journal of the Addictions, 27(5), 571-585.

Researchers have recently begun to investigate what treatment best suits women.[141] One study, which compared women in a female-only program to women in a coed program, found those in the all-women group did better after 2 years on several measures: fewer deaths, less alcohol consumption, less need for inpatient care due to relapse, higher job stability, better relationships with children and maintenance of child custody.[142] At the Betty Ford Center, women in their female-only program were found more likely to remain sober for 12 months than women in coed treatment programs.[143] After this evaluation, the Center discontinued coed treatment and moved all women into the female-only program.[144]

Quitting Smoking

More than 80 percent of adults who try to quit fail on their first attempt, and more than 50 percent fail on their second.[145] While overall quit rates are nearly equal for women and men, women appear less likely to keep trying or stay with it.[146] Among those who had previously quit for at least a week on three or more occasions, only 24 percent of female smokers planned to try again within a year, compared to 61 percent of male smokers.[147] Up to 90 percent of women who quit smoking while pregnant relapse within a year of giving birth.[148]

Women's fear of weight gain is a major reason for failing to quit.[149] In a survey of young adults (mean age 19.2), female smokers were twice as likely as male smokers to be concerned about gaining weight if they quit (57.9 percent vs. 26.3 percent).[150] Among quitters, more women than men reported wanting to eat more than usual (47.8 percent vs. 26.2 percent), and more women reported gaining weight (29.5 percent vs. 19.2 percent). Weight concerns may be particularly strong after a woman gives birth.[151] One study found that postpartum women who resumed

One woman on her struggle to quit smoking: "I have quit smoking about five times, only to gain weight. As a result, I have returned to smoking cigarettes. On November 1, 1990, deciding once again to quit, I joined a weight-loss clinic. I was determined to diet vigorously. By January 1, 1991, I had gained 12 pounds. I am faithful to my diet and to my exercises, and I am most unhappy to say that I have not lost one pound. I am on the verge of resuming smoking even though it is truly not what I want to do. I am vain, my clothes don't fit, my self-image is poor and I think that no matter what I do I will not lose weight until I begin to smoke again."[1]

[1] Shapiro, F. (1991). Correspondence: Smoking cessation and severity of weight gain. New England Journal of Medicine, 325(7), 517.

smoking were more likely to believe they would return to their former weigh. within six months of delivery than those who did not start smoking again.[152]

Accepting the near inevitability of some weight gain may be an important step towards quitting.[153] Women who quit tend to gain more weight than women who relapse, probably because their tolerance of some extra weight allows them to persist in cessation.[154]

High smoking rates and low quitting rates are also associated with depression, which is more common among women.[155] Individuals who are depressed are almost three times more likely to smoke, while depressed smokers are half as likely to quit as other smokers.[156] Stress is also cited as a factor in whether individuals start smoking, how much they smoke and whether they quit--despite the lack of evidence that smoking reduces stress.[157] This has led to the belief that smokers--particularly women--see cigarettes as a way to reduce stress and cope with nervousness, anxiety and emotions.[158]

While doctors and other advisers to female smokers can suggest ways to minimize weight gain and ease stress, they can also underline that some weight gain is probably inevitable--and decidedly less important than the enormous health benefits of quitting.[159] Women assigned to a cessation program, plus three sessions of exercise per week, were found five times more likely to be smoke-free a year later than women smokers who only used the cessation program.[160] In another study, female smokers who quit exercised more than those who relapsed--even though the exercise did not translate into less weight gain.[161] Nicotine gum may also help women trying to minimize weight gain.[162] Even when the

weight control component has no impact on weight gain or cessation, it may make the challenge of quitting more palatable to women.[163]

Using the Law

No aspect of women's substance use or abuse has generated more attention, concern, anger, outrage and controversy than prenatal drug use. Some public prosecutors have prosecuted women who test positive for drugs when they enter a hospital to deliver a baby. Some use the threat of jail or the loss of child custody to try to push women into treatment.[164]

Prosecutors have used drug test results as evidence to charge women with child abuse, delivering drugs to a minor through the umbilical cord and drug possession.[165] Since 1985, at least 200 pregnant and postpartum women in 30 states have been criminally charged under these laws.[166]

In 1995, as part of this CASA study, the New York City-based law firm Cadwalader, Wickersham and Taft completed a comprehensive, nationwide review of state statutes, case law and pending legislation pertaining to the legal issues surrounding substance-using pregnant or postpartum women. CASA updated this review in February 1996. Together this work found 35 reported decisions in 20 states stemming from the charges brought against such women since 1985.*[167]

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* States have prosecuted many more women; these were the only reported cases found. Most cases are not reported. Others may have been dismissed, may be in the process of adjudication or may involve indictments for an unrelated crime.

Among the 35 decisions, 20 women were tried for child abuse and neglect (including criminal neglect and endangerment), eight for delivery of drugs to a minor, six for possession and one for both delivery and possession.[168]

Of the 20 child abuse cases, 12 were dismissed. Six defendants were found guilty, but these convictions were overturned. One woman pled guilty to child abuse and was sentenced to six months in jail. One was allowed to enter a treatment program in lieu of incarceration.[169]

Teresa Reinesto was charged with child abuse after giving birth to a baby who tested positive for heroin and experienced withdrawal. The court ruled that her prenatal conduct did not fall within the "plain language of the [child abuse] statute.... Allowing the state to define the crime of child abuse according to the health or condition of the newborn child would subject many mothers to criminal liability for engaging in all sorts of legal or illegal activities during pregnancy." The court concluded, "We know of no other jurisdiction that has upheld a charge of child abuse against a woman for conduct that harmed her fetus, even if the resulting condition affected the child after birth."[1]

[1] Teresa Lopez Reinesto v. Superior Court; 182 Ariz. 190; 894 P.2d 733, 1995.

Of the eight cases of women charged with delivery of drugs to a minor, five were dismissed. One conviction was overturned. Two women entered no contest pleas and were sentenced (one to 18 months probation; the other to 18 months in jail and three years probation).[170]

Of the six cases of women charged with possession, four were dismissed. One conviction was overturned. One woman pled guilty and was sentenced to 150 days in jail, five years probation and a $225 fine.[171]

In the one case of the woman charged with delivery and possession, both charges were dismissed.[172]

In addition to prosecuting women criminally, child abuse has been alleged in civil proceedings. In these settings, the issue of whether prenatal drug use--as evidenced by a positive urine test at birth--is sufficient to prove child abuse and neglect in the absence of other evidence is hotly contested. While no state statute defines prenatal drug use as criminal child abuse or neglect, in eight states evidence of drug exposure in a civil case classifies a child as neglected or at risk of being neglected.*[173] In at least 22 states and Washington D.C., prenatal drug use is considered relevant in civil child abuse or neglect cases.[174]

In 1991, Dianne Pfannestiel, who was pregnant, went to an emergency room out of concern for her fetus after her partner beat her severely. She was arrested and charged with child abuse for drinking while pregnant. No charges of child abuse were brought against her partner.[1]

[1] Chavkin, W. et al. (1994). Finding common ground: The necessity of an integrated agenda for women's and children's health. Journal of Law, Medicine and Ethics, 22(3), 262-269.

The review of these cases reflects the difficulty of resorting to existing drug laws to deal with the frightful problem of illegal drug use during pregnancy and the controversy over the appropriateness of criminally prosecuting women who use such drugs while pregnant.[175] There's complete agreement on the objective: get the pregnant woman off drugs. Society struggles to "do something" to stop women from using illegal drugs during pregnancy. There is a desire to punish those who use drugs for reckless failure to fulfill their responsibility as childbearers; yet the difficulty of shaking addiction to drugs like crack cocaine and heroin is enormous. Abortion rights activists want to avoid any actions or

* Drug exposed children are defined by states as follows: neglected or abused (Illinois and Kentucky); disabled (Alaska); harmed (Florida); at biological or environmental risk (Hawaii); in need of services (Indiana); in need of assistance (Iowa); deprived (Oklahoma).

policies that might legally recognize rights of the fetus, because that might inhibit a woman's freedom to have an abortion. Right to life groups want the mother held responsible for any damage to the fetus, which they regard as the most vulnerable and innocent expression of human life. Because so many of these women are black, many African-Americans charge that the exercise of prosecutorial discretion in these cases is tinged with racism. The issue is further complicated by the lack of readily available treatment for pregnant mothers and decent foster care systems and orphanages for placing children of drug abusing mothers in drug-free environments.

In 1988 Brenda Vaughan, who was pregnant, spent nearly four months in jail for forging $700 worth of checks. Though the prosecutor had recommended probation, the judge imposed a sentence to last the duration of her pregnancy because Vaughan had been using cocaine and he wanted to protect the fetus by making sure she gave birth in prison. While in prison, Vaughan received no prenatal care or drug treatment.[1]

[1] Inciardi, J. A. et al. (1993). Women and crack-cocaine. New York: Macmillan Publishing Company; Garcia, S. A. (1993). Maternal drug abuse: Laws and ethics as agents of just balances and therapeutic interventions. International Journal of the Addictions, 28(13), 1311-1339; Krauss, D. (1991). Regulating women's bodies: The adverse effect of fetal rights theory on childbirth decisions and women of color. Harvard Civil Rights-Civil Liberties Law Review, 26(2), 523-548; Weber, E. M. (1992). Alcohol- and drug-dependent pregnant women: Laws and public policies that promote and inhibit research and the delivery of services. In M. M. Kilbey and K. Asghar (Eds.), Methodological issues in epidemiological, prevention, and treatment research on drug-exposed women and their children, NIDA research monograph 117 (pp. 349-365). Rockville, MD: NIDA.

Foster Care: The Era of Orphan Annie is Over

Americans may think of Orphan Annie and Daddy Warbucks when they think of foster care. But in the 1990s, foster care is a system to salvage children of drug and alcohol-abusing parents, which raises profound moral, ethical and legal questions about what is best for these children.

The current caseload of drug-exposed children has pushed foster care systems in cities and counties across the country to their limits and beyond, leading in some cases to children's deaths.[176] During the late-1980s, the number of children in foster care skyrocketed, largely as a result of drug and alcohol abuse.[177] The average age of children in foster care has declined, with the mother's use of crack cocaine before and after birth a primary cause.[178]

Child welfare administrators say that scarce resources and insufficiently trained staff are preventing adequate investigation of many cases.[179] The need for training and support in making judgment calls related to substance abuse is acute.[180] In New York City, a family court judge often decides 40 to 50 cases each day.[181]

In some states, social service agencies are required by law to make every effort to preserve families.[182] Only if parents abandon a child or demonstrate a chronic inability to care for them will a family court sever parental rights, making the child eligible for adoption.[183] But such proceedings often take at least three years to complete.[184] Children in foster care may be caught in limbo if their parents are not capable of caring for them, but have not done anything so severe as to warrant termination of parental rights.[185] In these cases, particularly if the woman refuses to enter treatment, some argue for easier and earlier termination of parental rights to get children into adoptive homes that may be able to compensate for any prenatal damage due to drug exposure.[186]

Some public officials and prosecutors are trying to make a positive drug test at birth sufficient evidence to justify removing children from their families and placing them in foster care.[187] To date, judges have based custody decisions solely on prenatal drug use in at

least 22 reported cases; in 16 of them, evidence of prenatal drug use was adequate to terminate parental rights and in 6 cases it was not.[188]

This shift away from keeping the child with the parents and avoiding foster care has been sharpened by the advent of crack cocaine. While the goal of family preservation has obvious appeal, the consuming power and destructive consequences of crack addiction have created concern that efforts to keep the family together can consign the child to a home of neglect, chaos, danger, violence and even death.

On the other hand, the chance to keep their children appears to be a strong motivator for many women to seek treatment and pull their lives together.[189] And the well-being of their children and their desire to be with them are often key reasons why addicted women seek treatment.[190]

The question of what would best serve the child raises profound questions about who should care for them: Should a family court judge ever decide that an alcoholic or drug-addicted mother can care for her children, especially given the high rate of relapse that is characteristic of addiction? Is foster care or an orphanage a better place for the children? Are adoptive homes better for children than parents with drug or alcohol problems? How do you weigh the emotional costs to the child of separating him or her from parents and family? What kinds of investigations by case workers are required to make such delicate judgments?

Often, politicians, policy-makers and prosecutors must answer these questions under the harsh spotlight of intense media coverage and public demands for quick solutions that follow the death of an innocent child at the hands of a drug-crazed or drunk parent. Public costs also mount. Family preservation services cost less than half the bill for foster care

placement, with estimates ranging from $3,000 to $7,000 per family per year compared to $10,000 to $17,500 per child in foster care per year. But support for family preservation attempts has waned as doubts persist about its appropriateness in situations of parental drug and alcohol abuse.[191] Crack cocaine, alcohol and other drugs have shattered old assumptions about parental rights and the sanctity of the family as society struggles to protect the children.

Mandatory or Coerced Treatment

Whether as an alternative to criminal prosecution or to the loss of child custody, mandatory treatment is one course of action increasingly in use. When faced with the prospect of incarceration or losing her children, the hope is that the drug-addicted mother will instead choose treatment. Because a woman could opt for jail, this policy is often called "coerced treatment."

Coerced treatment works as well as voluntary treatment in retaining men and women in treatment programs, an important predictor of success.[192] But reports vary on the effectiveness of coerced treatment for pregnant or parenting women.[193] The lack of research on the efficacy of mandatory or coerced treatment makes it impossible to draw any conclusions.[194]

The shortage of treatment renders much of this policy debate moot. The use of civil commitment for female addicts, in which judges assign individuals to treatment because they are considered a threat to themselves or someone else's safety, floundered in Massachusetts during the 1980s because of lack of available treatment.[195] Civilly-committed female

addicts were sent to prison until public outcry prompted the creation of more treatment slots for them; however, demand for treatment still exceeds supply.[196] New Mexico and Oklahoma make civil commitment contingent on the availability of appropriate treatment. Georgia, Hawaii, Minnesota and West Virginia require confinement in the "least restrictive alternative" treatment environment.[197]

In 1991, Jennifer Johnson was convicted of delivering drugs to a minor through the umbilical cord in the seconds after giving birth. She had tried to get treatment, but could not find a program that would admit her. Her conviction was unanimously overturned by the Supreme Court of Florida, which ruled that the drug trafficking law was not intended for use against a woman for giving birth to a drug-exposed baby.[1]

[1] Chavkin, W. et al. (1990). Drug-using families and child protection: Results of a study and implications for change. University of Pittsburgh Law Review, 54(1), 295-324; Moss, K. L. (1991). Forced drug or alcohol treatment for pregnant and postpartum women: Part of the solution or part of the problem? New England Journal on Criminal and Civil Confinement, 17(1), 1-16; Hansen, M. (1992). Courts side with moms in drug cases. ABA Journal, 78, 18.

The shortage of treatment in prison is a particular concern in light of the rise in incarceration of pregnant addicts. Pregnant woman in prison often get no drug or alcohol treatment and little prenatal care. Not surprisingly, their rates of miscarriage are high.[198] In one California county, only 20 percent of pregnant inmates delivered live babies. The only drug treatment program for female inmates in the California state prison system serves 120 women and has a waiting list of 70 to 90.

Driving the lack of support for treatment are doubts about its effectiveness.[199] While research on treatment outcomes is desperately needed, there is evidence that treatment of pregnant drug users can improve the short-term health of the woman and child and reduce health care costs. Pregnant, drug-using women in treatment have been found to have more

negative urine tests, infants with higher birth weights and larger heads, and more prenatal care than women who did not receive treatment.[200]

Two small studies of pregnant women in methadone maintenance for opiate addiction found that enhancing methadone programs with other services may improve the newborn's health.[201] Women on methadone who received weekly medical check-ups, group therapy to prevent relapse, rewards for clean urine screens and child care during treatment, in addition to standard services, had heavier infants and fewer positive urine screens than women in standard methadone treatment involving only daily methadone, group counseling and random urine screens.[202] In the other study, women with enhanced treatment had longer gestations and heavier babies, but not significantly fewer positive urine screens.[203]

Dee Cantie gave birth to a baby boy in 1994 with cocaine in his blood. Four months later, she was pregnant again. She dismissed the fathers as flings; she was married to the pipe. Her second boy was born premature with narcotics in his blood. She cried in the delivery room, realizing the addiction was no longer just her problem. The devil was on her back. "It was like a snowball," she said. "I had guilt, and I would use more. The more I used, the more I had to have." Officials threatened to take her children, so she checked into detox and, later, a day treatment center designed to help women with felony arrests get clean and put their lives in order. The sober life, a "normal" life, is a strange existence for her. "It's boring sometimes, but I can live with it. It's better than dying." And she adds, "It's about the kids, man. Without their mother, what are they going to do?"[1]

[1] LeDuff, Charlie. Cocaine daze. New York Times, 3/10/96, Sect. 13, p. 1.

Pregnancy: A Window of Opportunity

Pregnancy opens a window of opportunity when many female addicts can be motivated to enter treatment and stop using cigarettes, alcohol and illicit drugs.[204] Indeed, most pregnant women and teenagers at least reduce their licit and

illicit drug use while pregnant.[205] The benefits of prenatal care are even greater for HIV-infected women because medical treatment can cut the chances that they will transmit the virus to the fetus by 68 percent.[206]

Yet some experts caution that while pregnancy appears to motivate many women to enter treatment, it also aggravates feelings of shame and guilt, which may discourage women from seeking help.[207] Encouraging women to quit for both thenselves and their future children may be more effective.[208]

The threat of prosecution or swift loss of child custody if a woman fails a drug test complicates this message. Some experts warn that women who fear having to submit to a drug test will stay away from prenatal care altogether.[209] But sufficient research has not been done to resolve the issue.[210]

Health care providers complain that having to report the results of drug tests, particularly those done prenatally, compromises their vow of confidentiality to the patient, hinders the candor and trust they require from patients, and places them in a role of law enforcement rather than care giver.[211] However, the dangers of leaving a child with a drug-addicted or alcoholic parent has punctured old assumptions about the inviolability of the doctor-patient relationship in this situation.

One woman, charged with delivering drugs to a minor when she was pregnant, explains how getting help for a drug problem backfired: "I'm a perfect example of someone who tried to reach out, and it's all coming back in my face.... Everyone I talked to about my drug problem has been subpoenaed."[1]

[1] Krause, D. (1991). Regulating women's bodies: The adverse effect of fetal rights theory on childbirth decisions and women of color. Harvard Civil Rights-Civil Liberties Law Review, 26(2), 523-548.

Before the crack epidemic of the 1980s, hospitals did not systematically screen women or babies for drugs, either prenatally or at the time of delivery.[212] If health care providers discovered a pregnant woman had used drugs, the response could range from ignoring it to referring her to treatment.[213] Since the advent of crack, hospitals have tested more frequently, most often at birth.[214] If a woman or newborn screens positive for illegal drugs at delivery, hospital clinicians generally report the mother to child protective services as a matter of hospital policy, even when not required by law.[215]

In a survey of 49 hospitals in the Chicago metropolitan area, 94 percent always report a positive drug test to the child protection agency.[216] A Minnesota law requires physicians to test for drugs if they suspect substance abuse and report positive results to a child protective service agency.[217] In Florida, after a baby is born, any individual who learns that a mother has used drugs while pregnant must report her to the Florida Protective Service Systems' statewide child abuse registry, triggering an investigation of the infant's home.[218] If the home is deemed safe, case managers periodically visit to teach parents the skills to care for their child; if not, the agency begins legal proceedings to remove the child from the home.[219] Few women reported to the Florida register are offered treatment.[220]

Drug testing is far from universal. It is more common at public rather than private hospitals. Most look for certain indicators that trigger a drug test, which limits the number of women tested but sometimes sparks charges of selection bias and discrimination.[221] Adding to the controversy is the fact that some hospitals test without the mother's knowledge or consent.[222]

In the Chicago hospital survey, hospital personnel cited low income, nationality or ethnicity, and place of residence as cues for testing.[223] In another study in a midwestern suburb, nurses were more likely to suspect that women who were patients of hospital physicians--a larger proportion of whom were black and publicly insured--would have a positive drug test than the mostly white, privately insured women who were patients of private physicians, even though the difference in positive drug tests between the two groups was not statistically significant.*[224]

The thorny issues that surround testing and reporting of drug use during pregnancy add to the complexity of the moral, ethical and legal questions raised by women's substance abuse and addiction--questions our nation has not considered sufficiently.

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* A study in Pinellas County, Florida found that, despite similar rates of illicit drug use, African American women were 10 times likelier to be reported to the Florida Department of Health and Rehabilitative Services than white women.

VI.

Next Steps:

Acting on What We Know and Building Knowledge

The first step is to act on what we know. The second is to learn a lot more. The foundation of solid prevention and treatment efforts is research.

Since the 1960s, when only a handful of researchers was devoted to the problem, our understanding of how women's patterns of use differ from men's, the severe health and social consequences women suffer and the unique dangers that arise during pregnancy has come a long way. The current base of knowledge, if put to use, can make a big difference.[1]

Research and experience have taught us three critical lessons:

- Substance abuse and addiction among women is a major public health problem.
- If prevention and treatment efforts for women are to be effective, they must take into account their special needs.
- Most women with substance problems use a combination of alcohol, tobacco, and licit and illicit drugs.

With these lessons in mind, politicians and policy-makers, doctors and nurses, educators and parents, clergy and teen counselors--can mount an attack on this problem before another generation of women and their children are struck by its deadly consequences. For the knowledge gaps that remain, both basic and applied research is necessary. In particular, research, prevention and treatment efforts should focus on:

♦ **Smoking and weight loss.** As the number of women who die from smoking rises dramatically, the need for effective prevention and cessation strategies for female smokers becomes more urgent. Medical visits provide an ideal setting for primary prevention efforts. Doctors who routinely incorporate advice on smoking into prenatal and other medical visits increase the odds that a patient will quit.[2]

Yet we still know too little about how to break the strong link between weight concerns and smoking among women during adolescence, young adulthood and pregnancy.[3] Preventive efforts must not only attempt to deglamorize smoking, but also include a strategy to put in perspective the cultural bias toward extreme thinness for women. More research is needed to examine the relationship between weight concerns and illicit substances, such as cocaine and methamphetamine, that suppress appetite.

♦ **The health consequences of substance use and abuse.** Failing to include women in most research on substance use and abuse has left health care and public health professionals, policy-makers and women themselves without the knowledge they need to prevent or treat the problem.[4] Prevention efforts in doctor's offices, schools, businesses and community centers need to educate women about their greater susceptibility to the effects and health consequences of alcohol and illicit drugs.

Researchers need to investigate remaining questions about the consequences of alcohol, tobacco and drugs on women. The effect of alcohol on a woman's endocrine function, for example, is an important area for research, given evidence that consumption at levels many women consider "social drinking" might create serious health problems for women.[5]

Understanding the extent and nature of women's greater physiological vulnerability to the physical damage of alcohol, drugs and tobacco is also key.[6] Preliminary research has suggested that women who smoke may be more susceptible to lung cancer than men who smoke.[7] Investigating why women may become addicted to illicit drugs more quickly than men could also yield important results.

♦ **Substance abuse among young adult women.** The lack of a decline in heavy drinking among younger women during the 1980s, the popularity of binge drinking by college women and evidence suggesting that women's drinking patterns often solidify from ages 21 to 34 indicate that researchers should give greater attention to this time in a woman's life.[8]

The stresses and benefits of employment in young women's lives should be examined. To frame prevention and treatment efforts, researchers need to look at the relationship between alcohol and drug use and a woman's entry into the job market, how much she wants to work, how much support she receives from her spouse and how she perceives the occupational culture with regard to the sexes and drinking norms.[9]

One specific target for prevention efforts is the college campus, where many women drink heavily.[10] Since the link between high risk sex and alcohol is so strong, information about the health and other consequences of drinking for women might effectively be presented along with information about safe sex practices.[11] Women also need to understand the relationship between alcohol use and violence against women on campus.

♦ **Older women.** Even though women today live a third of their lives after menopause, little research on female substance abuse focuses on this phase.[12] The

frequency of late onset of alcohol problems, often in combination with prescription drug misuse, among women after menopause and in retirement makes studying the prevalence, risk factors and consequences of substance abuse among them necessary to developing effective prevention and treatment strategies.[13] Widowed women are a particularly important target for prevention, since they are three times more likely than married women to drink heavily.[14]

♦ **Prenatal exposure.** Prenatal visits provide physicians and nurses with an opportunity to identify substance abusers, encourage them to quit or reduce the frequency of their substance use, discuss "triggers" for substance use and refer dependent patients to treatment. Quitting or cutting down during pregnancy can reduce the adverse effects of prenatal substance abuse.[15] However, the majority of addicted pregnant women do not receive prenatal care; they may require a concerted outreach effort, as well as transportation and follow-up services.

Research to assess the long-term effects of prenatal exposure to alcohol, tobacco and illicit drugs is critical in order to bolster prevention efforts and design interventions to help children overcome damage done during pregnancy.[16] The Administration for Children, Youth and Families, the National Institutes of Health (National Institute of Child Health and Human Development, and National Institute on Drug Abuse) and the Substance Abuse and Mental Health Services Administration (Center for Substance Abuse Treatment) have funded a study to compare the birth outcomes of some 3,000 drug-exposed infants and 13,000 newborns whose mother did not use drugs, alcohol or tobacco during pregnancy.[17]

The 5-year study, begun in 1993, will also track the neurobehavioral development of 4,000 infants (half exposed, half non-exposed) for three years, taking into account the role of parenting and environmental factors.[18] Other research is also needed, based on current knowledge, to design and test effective interventions for children with fetal alcohol syndrome and other disabilities caused by substance use during pregnancy.[19]

♦ **Child abuse and neglect.** Substance abuse is a pervasive factor in cases of child abuse and neglect. Protecting a woman's right to privacy and the confidentiality of the doctor-patient relationship is important. But the fact that newborns of drug- and alcohol-abusing parents are at high risk of child abuse and neglect makes it critical to identify these children and get their parents into treatment for the safety and welfare of the children. Indeed, pregnancy is a window of opportunity when a women may be especially likely to seek treatment for her own sake and that of her child.

States need to look at how they are handling children of drug-abusing mothers, including a review of the systems of treatment, adoption, foster care and orphanages. Rampant drug and alcohol abuse raises questions about assumptions taken for granted years ago.

♦ **Multiple drug use.** Combined abuse of tobacco, alcohol and other drugs is the norm among alcoholic and drug-addicted women.[20] In one study, 82 percent of alcoholic women vs. 34 percent of non-alcoholic women were current smokers.[21] Separate funding agencies for alcohol research and drug research at the federal level, as well as distinct traditions and funding streams in the treatment community, have perpetuated a single-drug approach to research and clinical practice and thwarted coordinated responses to drug

epidemics. This approach ignores the pervasiveness of multiple substance abuse by women and renders single-drug strategies obsolete when new drugs come into fashion.[22]

Different drug and alcohol combinations, such as alcohol and prescription drugs, or alcohol and cocaine, appear to characterize different populations of women. Research can help decipher the patterns and effects of multiple drug use, with important implications for targeted prevention and treatment.[23]

Use of a combination of alcohol, illicit drugs and/or tobacco is also the norm among substance-using pregnant women. While some progress has been made to disentangle the relative impact of the these drugs, more research is needed to understand the mix, dose and timing of the tobacco, alcohol and drugs that most damage the fetus. The combination of alcohol and cocaine appears to be more severe than either on its own, though little research has focused on this phenomenon and its implications for prevention and treatment.[24]

Doctors may unwittingly encourage multiple drug use among women. Since female alcoholics are more likely than males to suffer depression, doctors may prescribe drugs for a woman's depression but fail to recognize her substance abuse.[25] Education about this potential danger and training in substance abuse recognition would help doctors avoid this mistake.

♦ **Racial and ethnic differences.** Studies should pay more attention to differences among women from racial and ethnic minorities and various income and educational backgrounds.[26] For example, white women are more likely to use drugs and alcohol, but black women are more likely to be regular or heavy users. Studies have found that while the rate of alcohol problems usually peaks for white women in their 20s, it continues to rise for

black women into their 40s and 50s, which suggests that the origin and course of these problems may be quite different.[27] Black women are also less likely than either white women or black men to quit smoking, revealing a need for cessation efforts that focus on black women.[28] Prevention programs targeting this group of smokers should challenge misconceptions about the relative safety of menthol cigarettes.[29]

Racial and ethnic differences also surface in attitudes toward treatment. Physicians who detect the signs of a drinking problem in an Hispanic or Asian American woman should be aware that a family's denial or desire to "protect" the woman by keeping her problem a secret may thwart her motivation to seek treatment.[30]

Most studies of African American women have concentrated on low-income females in urban America.[31] This focus has highlighted barriers to treatment for low-income women: many can afford neither transportation nor child care, and they need job training to help them support themselves after they are substance-free. However, as a result of this focus, we know little about drinking patterns, alcohol abuse and addiction among women in the black middle class.[32]

♦ **Treatment: What works?** Not enough research has been done on treatment outcomes for women.[33] To begin closing this gap, the National Center on Addiction and Substance Abuse at Columbia University is conducting an extensive study of 2,000 individuals at 200 treatment sites nationwide that will provide urgently needed data on what works for whom and why, including important insights by gender. CASA is also assessing the effectiveness of acupuncture as a treatment for cocaine addiction, and plans to include a sample of pregnant women. Furthermore, the National Institute on Drug Abuse funded 20

demonstration projects that treat pregnant and parenting women, called the Perinatal-20 projects, which have provided important data on what works for pregnant and postpartum women.[34]

More work is needed to explore the influence of genetic and environmental factors on substance abuse by women. Although research on alcoholism to date is inconclusive, family and other external factors seem to have a more significant impact than genetics. Developing a clearer understanding of the role these factors play is an important step in crafting prevention and treatment strategies for women.[35]

Additional investigations should focus on the role in treatment of addressing particular issues for women, such as the high rates of domestic violence, sexual abuse, eating disorders, primary depression, suicide attempts and family histories of substance abuse among female alcoholic and addicts. Women may be more comfortable discussing such personal issues in groups without men. Those who self-medicate to cope with these problems, past and present, should be taught alternative coping strategies and methods for building self-esteem.[36]

♦ **Prevention strategies and the special role of doctors.** Though the focus on drug and alcohol use during pregnancy is understandable and important, primary prevention of damage to both mother and fetus requires avoiding substance use before conception, which means focusing on women of child-bearing age and younger. Doctors, nurses and other health professionals have an important role to play here, and research can help them by testing the effectiveness of various intervention strategies in the setting of a hospital, clinic or doctor's office.[37] The fact that women are more likely than men to visit a doctor, but less

likely to have a doctor diagnose their substance abuse disorders, suggests that physicians are missing many opportunities to refer women to treatment.

Effective prevention strategies require an understanding of the origins of the problem. More research is needed to assess the importance of the risk factors that characterize women and differ so significantly from those of men. A priority should be determining which risk factors are causal. Evidence that women and men respond differently to prevention messages underlines the importance of targeted interventions.[38]

Doctors and school nurses also have an opportunity to detect the risk factors and early signs of substance abuse among teenage girls. Preventing substance abuse among adolescent girls is a challenge our nation cannot afford to neglect. Based on everything we know, if we can get our children to age 21 without smoking cigarettes, abusing alcohol or using illicit drugs, they are virtually certain never to do so. Research is needed to inform efforts that aim to seize this opportunity.[39]

♦ **Measuring the problem.** Tools to detect substance abuse tend to rely on quantity consumed by men. These instruments should adjust for the lower quantities of alcohol and drug use that characterize women with alcohol- and drug-related problems and include more women-specific concerns, such as how their drinking is affecting their health and close relationships.[40]

Traditional measures of alcohol-related problems focus on those that are typically male: drinking-related fights, drunk driving, alcohol-related arrests, financial problems and job impairment.[41] While women appear to be experiencing these problems at an increasing rate, researchers and doctors trying to detect substance abuse problems among their female

patients solely with these measures will miss many cases and underestimate the scope of the problem.

Characteristics frequently associated with substance abuse among women, such as depression, anxiety and family violence, should alert physicians to the possibility of substance abuse. Doctors can use a screening tool known as the CAGE questionnaire, as well as the following questions, to elicit additional information: "Do you ever carry an alcoholic beverage in your purse? How has your drinking changed during pregnancies?"[42] For elderly women, such questions might include: "Did you find your drinking increased after someone close to you died?"[43]

The Double-edged Sword of Stigma

Too often the public response to women's substance abuse and addiction has vacillated between denial or benign neglect on one hand and disdain or scorn on the other. Often the stigma of women's substance abuse and addiction drives our thinking and hinders our ability to grasp and fight the problem effectively. The shame and secrecy that surrounds this issue pose a special challenge for treatment providers, who require an open and honest dialogue with their clients.[44]

Yet stigma is a double-edged sword.[45] The cultural disapproval attached to female substance abuse may have a protective effect for women by discouraging them from taking the risk of using drugs and abusing alcohol or continuing to do so once they have experimented. This deterrent could account for a significant portion of the remaining gap between women and men's drinking and drug use.[46] Even as rates of drinking and drug use

among teenage girls and boys converge, girls are more likely than boys to "age out" of problem drinking or frequent drug use as they reach young adulthood, perhaps because they experience pressure to conform to gender expectations.[47] In a study of 31 women married to heavy drinkers, a woman's belief that such drinking among females is acceptable only in the teen and young adult years and at special occasions significantly reduced the likelihood that she would drink heavily.[48] Other research has found that women who support the goal of gender equality drink more, suggesting that freedom from gender-related expectations may prompt heavier use.[49]

At the same time, the negative consequences of stigma are formidable.[50] The sharp social disdain that female addicts face can dampen their will to confront their problem in a public light that is very harsh.[51] Often this disdain comes from within. One study found that 51 percent of alcoholic women and 36 percent of non-alcoholic women agreed that an intoxicated woman is "more obnoxious and disgusting" than an intoxicated man.[52] More than half the women in the study believed that a mother's alcoholism is more damaging to children than a father's alcoholism.[53]

Reducing the paralyzing consequences of stigma could reap substantial benefits. Women and their families would more readily recognize and acknowledge a substance abuse problem in its early stages and seek help if necessary.[54] Social stigma would no longer aggravate the debilitating lack of self-esteem that women must surmount to overcome their addiction.

Effective prevention and treatment of substance abuse and addiction among women requires eroding the special stigma of the female alcoholic and addict without suggesting that

the risks of smoking, alcohol abuse and illicit drug use among women and men are alike. As one expert points out, "The challenge is to preserve the protection afforded women by cultural expectations that they will drink less than men, while changing inaccurate perceptions about alcohol effects on sexual responsiveness," such as women's supposed promiscuity and consequent moral plunge.[55]

With preventive education about women's greater susceptibility to the consequences of alcohol and drugs and the potential harm to the fetus of such use during pregnancy, we can preserve cultural attitudes that maintain differences in female and male drinking norms and fully inform women about the risks they take when they smoke cigarettes, abuse alcohol and use drugs.[56] For women, the path to equality may offer equal access to the tragic consequences of substance abuse and addiction. But they do not have to go as willing victims. With effective prevention strategies, they do not have to go at all.

CHAPTER I.

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CHAPTER II.

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CHAPTER III.

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CHAPTER IV.

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CHAPTER V.

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CHAPTER VI.

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